EPA Question	Response	Reference
Section 1.0 - Respondent Information		
1. Provide the full legal, registered name and mailing address of Respondent.	Port of Portland 7200 NE Airport Way Portland, Oregon 97218	
2. For each person answering these questions on behalf of Respondent, provide: a. full name; b. title; c. business address; and d. business telephone number, electronic mail address, and FAX machine number.	1. Jessica Hamilton General Manager, Harbor Environmental Port of Portland 7200 NE Airport Way Portland, OR 97218 (503) 415-6033 – office (503)548-5546 – fax Jessica.Hamilton@portofportland.com 2. Sara Moore, Environmental Scientist Formation Environmental 2500 55th Street, Suite 200 Boulder, Colorado 80301 (971) 271-5328 - office (303) 442-3679 - fax smoore@formationenv.com	

EPA Question	Response	Reference
	3. Apex Companies LLC. Amanda Spencer, Principal Hydrogeologist Ashleigh Fines, Senior Project Scientist 3015 SW First Avenue Portland, Oregon 97201-4707 (503) 924-4704 - office (503) 924-4707 - fax aspencer@ashcreekassociates.com afines@ashcreekassociates.com	
3. If Respondent wishes to designate an individual for all future correspondence concerning this Site, please indicate here by providing that individual's name, address, telephone number, fax number, and, if available, electronic mail address.	Jessica Hamilton General Manager, Harbor Environmental Port of Portland 7200 NE Airport Way Portland, OR 97218 (503) 415-6033 – office (503) 548-5546 – fax Jessica.Hamilton@portofportland.com	

Section 2.0 - Owner/Operator Information		
4. Identify each and every Property that Respondent currently owns, leases, operates on, or otherwise is affiliated or historically has owned, leased, operated on, or otherwise been affiliated with within the Investigation Area during the period of investigation (1937-Present). Please note that this question includes any aquatic lands owned or leased by Respondent. a. Currently Owns b. Currently Leases c. Currently Operates d. Historically Has Owned e. Historically Has Leased f. Historically Has Operated	This response addresses certain portions of the Terminal 4 property where the Port is the current owner. Terminal 4 is located in the NW ¼ and NE ¼ of Section 2, Township 1 North, Range 1 West of the Willamette Meridian, Portland, Multnomah County, Oregon. The Terminal 4 property encompasses approximately 283 acres on the east bank of the Willamette River north of the St. Johns Bridge in North Portland at 11040 North Lombard Street. For the purpose of upland remedial investigation, Terminal 4 is divided into three areas by the Oregon Department of Environmental Quality (DEQ), which are referred to as Slip 1, Slip 3, and the Auto Storage Area. This response will address the Slip 1 and Slip 3 Upland Areas, as well as the in-water areas within Slips 1 and 3 owned by the Port. The Terminal 4 Auto Storage Area is addressed in a separate response consistent with the Port's EPA-approved schedule dated January 22, 2009. Note that there is some overlap with Berth 414 operations. From an operations standpoint, Berth 414 is part of the Toyota Auto Storage Area; however, some discussions of Berth 414 may be included in this response because of its adjacency to the Terminal 4 Slip 3 Upland Area and the Terminal 4 Removal Action Area. Collectively, the upland areas of Terminal 4 plus the in-water area owned by the Port will simply be referenced as "Terminal 4" for purposes of the remainder of this response, and consists of the following: • The Terminal 4 Slip 1 Upland Area consists of approximately 98 acres and is located at the north end of Terminal 4 bounded to the north by the property boundary with Schnitzer Steel, to the east by UPRR right-of-way and N. Lombard Street, to the south by the ordinary line of low water of Wheeler Bay and the Terminal 4 Slip 3 Upland Area, and to the west by the ordinary line of low water of the Willamette River. • The Terminal 4 Slip 3 Upland Area consists of approximately 23 acres is located east and south of Slip 3 and consists of uplands bounded to the north by the Terminal 4 Slip 1 Upland Area, to the east by UPRR right-of-way and N. Lombard Street, to the south by the Terminal 4 Auto Storage Area and the west by the ordinary line of low water of	See agreements and contracts at Tab 1. See deeds and easements at Tab 2. See property transaction records at Tab 5. See supplemental records at Tab 9.

	the Willamette River. • The Port also owns approximately 15 acres of the submerged lands below ordinary low water located in Slips 1 and 3. See also the response to Question 7. The Port is the current owner of the Terminal 4 property. The Port acquired certain property and improvements within the Terminal 4 property from the City of Portland Commission of Public Docks (City CPD) effective January 1, 1971. Terminal 4 is partially comprised of riverbed filled prior to Port ownership by predecessor owners who had not purchased the filled riverbed from the State. In November 1987, under a property sale and settlement with the Port, the State Land Board, then acting through the Division of State Lands, quitclaimed to the Port any ownership interests the State had in Terminal 4, including submerged and submersible lands in Slips 1 and 3 as mentioned above. Since acquiring the Terminal, the Port has acted primarily as the landlord for the tenants, which lease buildings and yard space and hold preferential berth use rights. As the owner of the Terminal since 1971, the Port has performed the normal activities of a commercial property lessor, such as maintenance and repair of the docks, craneways and berths, dredging the slips, and generally maintaining Port buildings and equipment. From time to time, the Port also provided certain limited services to tenants related to such things as dock cleaning and handling the receipt, movement and delivery of some cargo. From 1985 to 1988, the Port's activities at Terminal 4 also included use of the gearlocker building for the Port's Marine Facilities Maintenance (MFM) department. Currently, MFM uses the gearlocker building for storage. Since its acquisition of the property, the Port has entered into leases and other agreements for use of the Terminal 4 property by entities that are responsible for operations at their lease or use areas. The Port currently holds leases or other agreements for use of the Terminal 4 Slip 1 and Slip 3 areas and associated structures with the following tenants who are responsible for operations at their lease or use areas: • Cereal Food Processors, Inc. • International Raw Materials	

	• Rogers Terminal and Shipping • Kinder Morgan Bulk Terminals (KMBT) Specific information on current and historical tenants and their respective operations is discussed in response to Question 11.	
5. Provide a brief summary of Respondent's relationship to each Property listed in response to Question 4 above, including the address, Multnomah County Alternative Tax lot Identification number(s), dates of acquisition, period of ownership, lease, operation, or affiliation, and a brief overview of Respondent's activities at the Properties identified.	The Port is the current owner of certain property and improvements within the Terminal 4 property. The address for the Terminal 4 property is 11040 N Lombard Street. Details on the tax lots that comprise the Slip 1 and Slip 3 portions of the property are summarized below: • Tax Lot 500 – Tax Lot ID #2N1W35C 500; Total Acreage: 3.19; the Port acquired the tax lot in 1971 from the City CPD. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 500 is R971350540. • Tax Lot 700 – Tax Lot ID #2N1W35C 700; Total Acreage: 0.30; the Port acquired the tax lot in 1971 from the City CPD. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 700 is R971350250. • Tax Lot 100 – Tax Lot ID #1N1W02 100; Total Acreage: 88.07; the Port acquired the tax lot in 1971 from the City CPD. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 100 is R961021100. • Tax Lot 200 – Tax Lot ID #1N1W02 200; Total Acreage: 5.38; the Port acquired the tax lot in 1971 from the City CPD. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 200 is R961020420. • Tax Lot 300 – Tax Lot ID #1N1W02 300; Total Acreage: 1.74; the Port acquired the tax lot in 1971 from the City CPD. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 300 is R961020930. The address for this property is N Bradford St.	See deeds and easements at Tab 2. See property transaction records at Tab 5.

	• Tax Lot 2400 – Tax Lot ID #1N1W02A 2400; Total Acreage: 0.5; the Port acquired the tax lot in 1971 from the City CPD. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 2400 is R961021020. • Tax Lot 2700 – Tax Lot ID #1N1W02A 2700; Total Acreage: 1.71; the Port acquired the tax lot in 1971 from the City CPD. This property is currently leased by International Raw Materials Ltd. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 2700 is R961021260. • Tax Lot 2800 – Tax Lot ID #1N1W02A 2800; Total Acreage: 1.2; the Port acquired the tax lot in 1971 from the City CPD. This property is currently leased by International Raw Materials Ltd. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 2800 is R961021270. • Tax Lot 2900 – Tax Lot ID #1N1W02A 2900; Total Acreage 0.8; the Port acquired the tax lot in 1971 from the City CPD. This property is currently leased by International Raw Materials Ltd. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 2900 is R961021280. • Tax Lot 100 – Tax Lot ID #1N1W02B 100; Total Acreage 2.0; the Port acquired the tax lot in 1971 from the City CPD. This tax lot is currently leased by Cereal Food Processors Inc. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 100 is R961020410. • Tax Lot 200 – Tax Lot ID #1N1W02B 200; Total Acreage 0.74; the Port acquired the tax lot in 1971 from the City CPD. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 200 is R961020910. • Tax Lot 300 – Tax Lot ID #1N1W02B 300; Total Acreage 0.56; the Port acquired the tax lot in 1971 from the City CPD. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 300 is R961020960.	

	• Tax Lot 400 – Tax Lot ID #1N1W02B 400; Total Acreage 0.7; the Port acquired the tax lot in 1971 from the City CPD. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 400 is R961021030. • Tax Lot 500 – Tax Lot ID #1N1W02B 500; Total Acreage 0.75; the Port acquired the tax lot in 1971 from the City CPD. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 500 is R961020380. • Tax Lot 700 – Tax Lot ID #1N1W02B 700; Total Acreage 0.26; the Port acquired the tax lot in 1971 from the City CPD. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 700 is R961021190. • Tax Lot 600 – Tax Lot ID #2N1W35C 600; Total Acreage 0.4; the Port acquired the tax lot in 1971 from the City CPD. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 600 is R971350240. • Tax Lot 3000 – Tax Lot ID #1N1W02A 3000; Total Acreage 2.04; the Port acquired the tax lot in 1971 from the City CPD. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 3000 is R961021350. • Tax Lot 3100 – Tax Lot ID #1N1W02A 3100; Total Acreage 5.92; the Port acquired the tax lot in 1971 from the City CPD. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 3100 is R961021360. • Tax Lot 2500 – Tax Lot ID #1N1W02A 2500; Total Acreage: 0.03; the Port acquired the tax lot in 1971 from the City CPD. This property is currently leased by KMBT. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 2500 is R961021240. • Tax Lot 2600 – Tax Lot ID #1N1W02A 2600; Total Acreage: 6.52; the Port acquired the tax lot in 1971 from the City CPD. This property is currently leased by KMBT. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 2600 is	

	R961021230. • Tax Lot 600 – Tax Lot ID #1N1W02B 600; Total Acreage: 0.01; the Port acquired the tax lot in 1971 from the City CPD. This property is currently leased by KMBT. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 600 is R961021250. • Tax Lot 300 – Tax Lot ID # 1N1W02B300; Total Acreage: 0.56; the Port acquired the tax lot in 1971 from the City CPD. This property is currently leased by Cereal Foods. The Multnomah County Alternative Tax Lot Identification Number for Tax Lot 300 is R961020960. Based upon the Port's EPA-approved schedule dated January 22, 2009, the Port agreed to provide information for 24 separate tax lots in this response. During the course of research for this response, however, it was determined that two of these tax lots (R961021200 and R961020390) are associated with the Terminal 4 Auto Storage Area. Accordingly, those two tax lots will be addressed in that response. See also response to Question 4 (c) above.	
6. Identify any persons who concurrently with you exercises or exercised actual control or who held significant authority to control activities at each Property, including:	See response to 6 (a) through (i) below.	
a. partners or joint venturers;	Not applicable.	
b. any contractor, subcontractor, or licensor that exercised control over any materials handling, storage, or disposal activity on the Property; (service contractors, remediation contractors, management and operator contractors, licensor providing technical support to licensed activities);	Material handling and disposal of materials associated with Terminal 4 Slip 1 and Slip 3 are described further in response to Questions 27, 47, and 64. The contractors associated with those occurrences are as follows: • Advanced Environmental Technical Services • Algirdas Contracting, Inc.	See agreements and contracts at Tab 1. See other environmental records at Tab 7.

	• Burlington Environmental, Inc.(BEI) • CET Environmental Services, Inc. • Chem-Security Systems • Chemical Waste Management (CWM) • Chempro • Cowlitz Clean Sweep • Crowley Environmental Services. • C. Wark Trucking • Dave Obrist Trucking and Excavating. • ECTI • Elder Demolition • Envirocon • Fitt Environmental • GE Industry Sales & Service • General Electric International Inc. • Gresham Sanitary Service, Inc. • Hahn and Associates, Inc. (HAI) • Hickey Marine Enterprises, Inc. • Foss Environmental • MRP • MJD Construction • NW Environmental Services • Northwest Abatement (NWA) • Northwest Field Services • Northwest Pacific Partners • Oil Re-Refining Co., Inc. • ONYX Environmental SVCs L.L.C. • Oregon Hydrocarbon Inc. • Savannah Transport • Petroleum Equipment Maintenance Company (PEMCO)	See supplemental records at Tab 9.

	• Phillips Environmental, Inc. • Riedel Environmental Services • Resource Recovery • RMCAT Environmental • Rollins Environmental Services, Inc. • Safety Kleen Corp. • Spencer Environmental Services, Inc. • Sunrise Express • Sunwest Energy Corporation • Terra Hydr, Inc. • Thermo Fluids • Van Waters and Rogers • Veolia ES Technical Solutions • Waste Express • Waste Management • West Coast Marine Cleaning • Western Compliance Services, Inc. • Westinghouse • Wilkins Trucking Co. Inc.	
c. any person subleasing land, equipment or space on the Property;	See response to Question 6 (f), (g) and (h).	
d. utilities, pipelines, railroads and any other person with activities and/or easements regarding the Property;	The following utilities and easements were identified at Terminal 4 property: **<u>Railroads</u>** • American Natural Soda Ash Corporation was granted a preferential license of trackage from the Port in 1986 to use up to 1,300 lineal feet of rail track. • Canpotex Shipping Services Ltd. held an agreement to use rail trackage in 1980. • OWR&N and UPRR were granted the right and authority to repair the face of Pier 5 and install a lateral pipeline from the water terminus of the existing pipeline in 1941. In	See agreements and contracts at Tab 1. See deeds and easements at Tab 2. See property transaction records at Tab 5.

	1970, the two companies were granted an easement for the construction, use, operation, maintenance, repair, renewal and replacement of the petroleum product pipeline. In 1977, the two companies entered into an agreement to construct, maintain and use a private roadway at Terminal 4 and had the right to construct, maintain, and use the area between the rails of tracks and the right of way. In 1988, the railroads granted an easement to the Port to install and maintain an access road and necessary lighting installations. • IRM was granted a permit and right-of-entry in 2007 to expand its operations at Terminal 4 to include rail car storage and use of additional trackage. • UPRR sold 4.94 acres to the City of Portland in 1920 subject to perpetual easements and rights to maintain, use, and replace the pipeline; and to moor any vessel at premises and discharge oil. Subsequent land transaction in 1948 provided UPRR with the right to install, replace, relocate, maintain, and use pipelines from pier head to tanks, moor vessels in front of premises to discharge oil through pipelines, and use all docks, wharves, or other structures for the purpose of discharging oil from or into vessels. UPRR relinquished portions of easements and rights outlined in the 1920 and 1948 property transactions in 1948 and 1959, respectively. UPRR was granted an easement in 1959 to install, replace, and relocate its pipeline from the head of the pier to oil tanks on its adjoining property east of Terminal 4. In 1977, UPRR was granted an easement for construction, use, operation, maintenance, repair, renewal, and replacement of its pipeline upon, along and under Port property. In 2004, UPRR was granted an agreement to use rail trackage at Terminal 4 and in 2006, entered into an agreement for additional trackage. • OWR&N was granted perpetual easements and rights in 1920 to maintain, use and replace certain pipeline from the pier headline to a tank and to moor vessels in front of the pipeline to use existing discharging oil cargo from vessel to tank. **<u>Utilities</u>** • The City of Portland was granted an easement for sewer and water in 1975 and, in 1986, was granted an easement to lay down, inspect, restore, and replace a sewer line. In 2003, the City was granted an easement to install, operate, maintain, and replace an 8 inch public water line and vault.	See supplemental records at Tab 9.

	• The City of Portland Bureau of Water Works was granted an easement in 1970 from the City CPD for a water service line and meter vault that serviced the CPD exclusively. • Northwest Natural Gas Company was granted an easement in 2005 for construction, installation, operation, maintenance, replacement, reconstruction, and removal of natural gas pipeline. • Pacific Northwest Bell Telephone Company was granted an easement in 1987 for underground communication lines and an above ground cabinet. • Pacific Power & Light was granted an easement in 1972 for continued operation of a 115 kv electric transmission line • Pacific Molasses was permitted to install an 8 inch line and pump to its plant in 1985. • Portland General Electric Company (PGE) was granted an easement in 1988 to install, maintain, repair, rebuild, operate and patrol underground electrical power lines and appurtenances • Qwest Corporation was granted an easement in 2005 to install, operate, maintain and remove aerial and underground telecommunications lines and equipment. **<u>Other Easements</u>** • The Port was granted an easement from DSL in 2003 to replace a storm drain pipe and outfall. • Weyerhaeuser Timber Company was granted an easement from UPRR in 1906 to extend and maintain slopes of cuttings or embankments. Additional information on the easement holders is provided in response to Question 11 below.	
e. major financiers and lenders;	Not applicable.	
f. any person who exercised actual control over any activities or operations on the Property; g. any person who held significant authority to control any activities or operations on the Property; h. any person who had a significant presence or who conducted significant activities at the Property; and	The Port is the current owner of the Terminal 4 property. The following entities held leases, subleases, permits and rights-of-entry, or utilized yard space or the dock/warehouse areas and/or structures, exercised or had the authority to exercise control over the activities and operations, and/or had a significant presence or conducted significant activities. Note that time periods of involvement could be more expansive; dates are based on best available information at this time.	See agreements and contracts at Tab 1. See deeds and easements at Tab 2.

	1. American Natural Soda Ash Corporation (1986-1987) 2. Argo Products Company (1953) 3. Associated Marine Surveyors (1977-1979) 4. Bentley & Markey (1967) 5. BHP International Marine Transport Inc. (1993-1996) 6. Boise Cascade Corporation (1970-1971) 7. Bosco-Milligan Foundation 8. Canpotex Shipping Services Ltd. (1980) 9. Kerr Gifford & Co., Inc./Cargill Inc. (1947-2003) 10. Carr Marine Enterprises (1995-1999) 11. Cereal Food Processors, Inc. (1992-present) 12. Ceres Marine Terminals, Inc. (1991-1992) 13. City of Portland (1917-1980) 14. CLD Pacific Grain, LLC (2001-2003), 15. CT&H. Company (1987-1990) 16. Daiichi/T.O. Line (1987-1989) 17. Dave Bush Productions (2000) 18. Eagle Flour Mills (1919-1921) 19. Elvalsons, Inc. (1973-1974) 20. Festival Arts (1976-1977) 21. Flowers Three, Inc. (1977) 22. Gerber Advertising (1994) 23. General Petroleum Corporation (now ExxonMobil) (1922-1939) 24. Georgia Pacific (1992) 25. H.N. Leckenby (1923 to at least 1950) 26. Hall-Buck Marine (now Kinder Morgan Bulk Terminals [KMBT]) (1987-present) 27. Hudson Bear Contracting (1998) 28. International Raw Materials, Ltd. (1995-present) 29. I.T.O. Stevedoring (1986-1988) 30. (b) (6) (1956-1984) 31. Jones Oregon Stevedoring (At least 1971 & 1979-1987) 32. Kinder Morgan Bulk Terminals (KMBT, previously Hall-Buck Marine) (1987-present)	See property transaction records at Tab 5. See supplemental records at Tab 9.

	33. Koppers Co. Inc. (1984-1988) 34. Koppers Inc. (1989-1998) 35. La Grande Industrial Supply Co. (1962-1963) 36. Lakeside Production Company (1994) 37. Mado Productions, Inc. (1999) 38. Martin Marietta Aluminum (1974-1982) 39. Matson Lines (1922-1982) 40. Mitsui & Co. (1967-1976) 41. Multnomah County Division of Public Safety (1980 to 1995) 42. Nike, Inc. (1999) 43. Northwestern Ice and Cold Storage Company (at least 1945) 44. Oregon Sulfur Company (1920) 45. Oregon Terminal Company (OTC) (1988-1996) 46. Oregon-Washington Railroad & Navigation Company (OWR&N Co.) (1906-1988) 47. Pacific Molasses (PM-Ag) (1947-1995) 48. Pacific Railroad Preservation Association (1994-1997) 49. Peninsula Terminal Company (1999-Unknown) 50. Portland Rose Festival Association (1973-1974) 51. Portland Seafarers Mission (2003-2008) 52. Portland Stevedoring Company (at least 1957-1972) 53. Quaker State (1953-1985) 54. Restaurant Consultants, Inc. (at least 1978) 55. Richfield Oil Company (~1948) 56. Rogers Terminal & Shipping (1983-present) 57. Salmon Bay Barge Lines, Inc. (2003-Unknown) 58. Salvage Contractors, Inc. (2001-2003) 59. Schnitzer Investment Corporation (at least 1978) 60. Schnitzer Steel Products Company (1961-1962) 61. Stevedoring Services of America (now SSA Marine, previously Brady Hamilton Stevedore Company) (1974; 1985-1987) 62. Standard Oil (now Chevron) (1969-1984) 63. Star Shipping A/S (Star) (1988-1995)	

	64. Stauffer Chemical Company (at least 1971-1972) 65. Storch Corporation/Engineers (1975-1976) 66. Terminal Flour Mills Company (1921-1992) 67. (b) (6) (1995) 68. Tidewater Barge Lines, Inc. (1999) 69. Union Chemical Company (1985) 70. United States (1941-1947) 71. UPRR (1906-present) 72. (b) (6) (1919) 73. W.R. Grasle Company (1989-1990) 74. Western Kraft (Approximately 1961-at least 1962) 75. Wieden and Kennedy (1997)	
i. government entities that had proprietary (as opposed to regulatory) interest or involvement with regard to the activity on the Property.	The City CPD operated the grain terminal from its inception in 1920 until 1942, and coal, ores and ore concentrates were handled during its ownership of the property from approximately 1921 to at least 1969. The City of Portland Fire Bureau operated a fire boat station at Terminal 4 from a pier into Wheeler Bay from approximately 1960 through approximately 1980. During the City CPD's ownership of Terminal 4 in 1941, the United States leased the entirety of Terminal 4 as it existed at that time for use as the Army Transport Service's Sub-Port of Embarkation to the Seattle District. As a result, the City CPD shifted its municipal shipping activities to other City CPD areas. The U.S. site was used to embark/disembark troops, store equipment and materials, house Army personnel, refuel ships, and load ships for transport overseas. The United States returned Terminal 4 to the City CPD in 1947. The Multnomah County Division of Public Safety entered into an agreement with the Port in 1980 to construct, maintain and operate a boathouse for Harbor Patrol at Wheeler Bay. Multnomah County terminated its lease in 1995.	
7. Identify and describe any legal or equitable interest that you now have, or previously had in each Property. Include information regarding the nature of such interest:	The Port acquired certain property and improvements within what is now the Terminal 4 property from the City of Portland Commission of Public Docks (City CPD) effective January	See CPD bargain and sale deed at Tab 2 of

when, how, and from whom such interest was obtained; and when, how, and to whom such interest was conveyed, if applicable. In addition, submit copies of all instruments evidencing the acquisition or conveyance of such interest (e.g., deeds, leases, purchase and sale agreements, partnership agreements, etc.).	1, 1971 and acquired certain filled lands from the State Land Board under the 1987 Settlement with DSL. The Port retains ownership. No interests have been conveyed.	the Port's 104(e) response for Terminal 1 North, submitted to EPA on July 16, 2008. See DSL Settlement and Mutual Release at Tab 1 of the Port's 104(e) response for Terminal 1 South, submitted to EPA and dated August 16, 2008.
8. If you are the current owner and/or current operator, did you acquire or operate the Property or any portion of the Property after the disposal or placement of hazardous substances, waste, or materials on, or at the Property? Describe all of the facts on which you base the answer to this question.	Yes. The available records reviewed for this response indicate releases occurred at the Terminal 4 property prior to the Port's 1971 acquisition. For example, releases occurred from the UPRR pipeline in 1970 (see Question 22, item 77). The responses to questions 11, 22, and 62 provide information on documented releases that occurred prior to Port ownership. In addition, we know that loading and unloading practices can lead to releases of import materials material to the river. Sediment sampling results indicate the presence of constituents consistent with materials imported through Terminal 4 prior to 1971 (e.g., lead, zinc); therefore, it stands to reason that that materials loaded and unloaded prior to 1971 were at times released to the river.	
9. At the time you acquired or operated the Property, did you know or have reason to know that any hazardous substance, waste, or material was disposed of on, or at the Property? Describe all investigations of the Property you undertook prior to acquiring the Property and all of the facts on which you base the answer to this question.	The acquisition of Terminal 4 was performed pursuant to State legislation, a vote by the citizens of Multnomah, Clackamas and Washington Counties, a City of Portland Ordinance, and action by the Port Commission, based on the determination that it was in the public's best interest to consolidate public dock ownership within one government entity, from the City to the Port.	

	The available historical documents relating to the Port's acquisition of the Terminal 4 property from the City CPD do not indicate the Port had prior knowledge or reason to know that any hazardous substance, waste, or material was disposed of on, or at the property. No evidence of investigation has been located apparently because the acquisition was directed by state legislation.	
10. Identify all prior owners that you are aware of for each Property identified in Response to Question 4 above including, but not limited to, the following entities believed to have owned one or more of your Properties: a. City of Portland b. Freightliner LLC c. Oregon Shipbuilding Corporation d. Shipyard Commerce Center LLC e. Union Pacific Railroad; and f. West Coast Terminal Company For each prior owner, further identify, if known and if relevant, and provide copies of any documents you may have regarding: i. the dates of ownership ii. all evidence showing that they controlled access to the Property; and iii. all evidence that a hazardous substance, pollutant, or contaminant, was released or threatened to be released at the Property during the period that they owned the Property.	Former owners of some or all of the Terminal 4 property include: • (b) (6) (unknown to 1906) • Broadway Holding Company (unknown to1972) • City of Portland CPD (1917-1971) • Oregon-Washington Railroad & Navigation Company (1906 to 1921) , • UPRR (unknown to 1948) , • DSL (1859-1987) Periods of ownership are reflected by the available deeds which are included in Tab 2. The Port did not find evidence of ownership of the property by Freightliner, LLC, Oregon Shipbuilding Corporation, Shipyard Commerce Center LLC or West Coast Terminal. A description of releases that occurred during the City of Portland's, DSL's, Oregon-Washington Railroad & Navigation Company, Broadway Holding Company, and UPRR's ownership of the Terminal 4 property is included in the response to Questions 11, 22 and 62 below. Evidence of those releases is included in Tabs 6 and 7. Evidence of releases that occurred prior to 1906 was not identified.	See agreements and contracts at Tab 1. See deeds and easements at Tab 2. See site investigation records at Tab 6. See other environmental records at Tab 7. See supplemental records at Tab 9.
11. Identify all current or prior operators of the Property, including lessors, you are aware of for each Property identified in response to Question 4 above including, but not limited to, the following entities:	Operations at Slip 1 during the City CPD's ownership (1917-1971) included loading, unloading and storage of grain, cold storage, fumigation of cotton and food products, liquid storage (fertilizer, molasses, tallow, urea, caustic soda, and fats), milling of grain into flour, container food freight, a gasoline station, salvage yard, operation of a break-bulk berth and fire	See agreements and contracts at Tab 1. See deeds and

a. Beall Pipe, Inc.; b. Benson Industries, Inc.; c. Cargill, Inc.; d. Cascade General; e. Cascade West; f. Chevron USA; g. Classical Chinese Garden Trust; h. Hunt Foods, Inc.; i. Kaiser; j. Multnomah County Sheriff's Office; k. Pacific Molasses Company; l. Pacific Pine; m. Port of Cascade Locks.; n. Portland Municipal Airport; o. Safety Kleen; p. Shaver Transportation Company; q. Speed Towing; r. St. John Auto Wrecking Yard; s. Thermo Pressed Laminates, Inc.; t. Tristar Transload, Inc.; u. U.S. Maritime Commission; v. Ultraboard; w. War Assets Administration; x. West Coast Paper Company; y. Western Transportation.; and z. Willamette Iron and Steel Corporation. For each such operator, further identify, if known and if relevant, and provide copies of any documents you may have regarding: i. the dates of operation; ii. the nature of prior operations at the property; iii. all evidence that they controlled access to the property; and iv. all evidence that a hazardous substance, pollutant, or contaminant was released or threatened to be released at or from the Property during the period that they operated on the Property.	boat moorage, and importing ore and ore concentrates, including alumina, bauxite, chromite, chrome ore, coal, ferro-phosphorous iron ore, manganese, lead concentrate, tricaphos and zinc concentrate. During the Port's ownership of Slip 1, tenant operations have generally included grain storage, milling grain, liquid bulk storage, a soda ash handling area, and storing and maintaining equipment for loading and unloading ships. The buildings at Pier 1 and Pier 2 have also been used for storage of impounded vehicles from a federal sting operation, architectural artifacts for a local historical group, importing live sheep, and for handling break-bulk cargoes such as steel coil and aluminum ingots. Historically, the berthing areas at Slip 3 have been used for bulk cargo loading and unloading operations. Products handled at the Slip 3 berths have included petroleum products, soda ash, talc, sulfur, zinc, lead and copper ores/concentrates, bentonite clay, coal, coke, and iron briquettes. Within Slip 3, bulk operations at Berth 412 were terminated in 1989. Currently only Berths 410 and 411 are in use for handling soda ash. Pencil pitch was imported through Berths 410 and 411 of Slip 3 and handled at the adjacent Slip 1 upland area from 1979 to 1998. Other areas of Terminal 4 currently have areas for the handling of grain, dry and liquid bulks, and break-bulk cargo. Of the entities listed in (a) through (z) of Question 11, only Cargill, Chevron, Multnomah County Sheriff's Office, and Pacific Molasses are known to have been prior operators of the Terminal 4 property, as explained below. Other entities not listed in Question 11 (a) through (z) have been identified as operating on the property and they are discussed below. Note that time periods of involvement could be more expansive; dates are based on best available information at this time. **1. Allied Chemical** i. 1970 ii. Stored and unloaded bulk ammonium sulphate at the Balloon Building and Pier 4. iii. Port property files iv. No documented evidence of releases was identified.	easements at Tab 2. See property transaction records at Tab 5. See other environmental records at Tab 7. See supplemental records at Tab 9.

	2. American Natural Soda Ash Corporation i. 1986 to 1987 ii. Held an agreement to use up to 1,300 lineal feet of rail track. iii. Port property files iv. No documented evidence of releases was identified. **3. Argo Products Company** i. 1953 ii. Leased Tanks No. 10 and 11 at Slip 1. iii. Port property files iv. No documented evidence of releases was identified. **4. Associated Marine Surveyors** i. 1977 to at least 1979 ii. Held a month-to-month lease for second floor office in the Administrative Building at Pier 1. iii. Port property files iv. No documented evidence of releases was identified. **5. Bentley & Markey** i. 1967 ii. Held a space rental agreement for unspecified purposes. iii. Port property files iv. No documented evidence of releases was identified. **6. BHP International Marine Transport** i. 1993 to 1996 ii. Held a terminal use agreement for cargo handling (excluding bulks) from vessels. iii. Port property files iv. No documented evidence of releases was identified. **7. Boise Cascade Corporation** i. 1970 to 1971 ii. Leased House 7 at Pier 1 for loading and unloading pulp. iii. Port property files iv. No documented evidence of releases was identified. **8. Broadway Holding Company**	

	i. Unknown to 1972 ii. Prior owner of a strip of land along the northern property line in the vicinity of Berth 401. Prior operations unknown. iii. Port property files iv. No documented evidence of releases was identified. **9. Canpotex Shipping Services Ltd.** i. 1980 ii. Leased rail Track for storing railcars. iii. Port property files iv. No documented evidence of releases was identified. **10. Cargill Inc. (previously Kerr Gifford & Co., Inc.)** i. 1947 to 2003 ii. Operated the grain elevator and storage bins north of Slip 1 beginning in 1947. In 1954 Kerr-Gifford merged into Cargill. Cargill also leased the coal bunkers at Pier 5 for an interim period of ninety days in 1958 held a lease of inshore side of House #4 and Pier 1, and leased office space at the Terminal 4 Administration Building iii. Port property files iv. On December 19, 1971, according to a Coast Guard report, Jones Stevedoring and Cargill released grain into the Willamette River at Pier 1. On March 20, 1972, according to a Coast Guard report, Cargill released grain into the Willamette River at Pier 1. On October 8, 1984, an oil spill was observed at Berth 405. Cargill reported that 2 to 5 gallons of gear grease had spilled out of a bucket by the grain hopper on Pier 1. Riedel Environmental responded to clean up the spill. Through a 1953 agreement, the City CPD allowed Kerr Gifford to install a groundwater production well with a turbine pump. The well was closed by filling with cement in 1992. Field notes from the closure indicate approximately 7 feet of oil was observed on top of the water in the well. Cargill contacted Spencer Environmental who pumped 307 gallons of product from the well. A State of Oregon Water Well report dated April 27, 1992, indicated that the well was filled with cement on or about April 23, 1992.	

	In April 1992, Cargill discovered contamination in a water well northeast of Cargill Operating House Building 152. An environmental site assessment conducted at the end of CLD Pacific Grain/Cargill's lease in 2003 documented a variety of spills and releases associated with Cargill's operations. These releases included, but were not limited to, hydraulic oil releases at the Cargill pump house near the truck inspection (C-11) area. Cargill subsequently contracted with Mactec to remove impacted soils at the C-11 location. An excavation in November 2003, however, left an area of impacted soil on-site due to inaccessibility. Cargill's operations at its former leasehold triggered a DEQ-supervised Upland Source Control evaluation of what became known as the OU1 area of the Slip 1 Upland Area. The RI was completed in 2006. Investigation of the cesspools at the former Cargill leasehold during the Slip 1 RI revealed the presence of non-aqueous phase liquid (NAPL) at approximately 17 feet bgs. In 2008 paint chips from the Cargill grain tanks were observed near and in catch basins. Samples from the catch basins were sampled in March 2008. PCBs were detected in both the paint chips and the solids from the catch basins. During the RI, surface soil around the gain tanks also showed levels of the same PCBs. A comparison of the types and relative constituents detected in the catch basin solids support that paint chips are the likely source of the constituents reported in the samples. **11. Carr Marine Enterprises** i. 1995 to 1999 ii. Leased an area at Wheeler Bay for mooring barges and other marine equipment as well as an upland area for storage and parking. iii. Port property files iv. No documented evidence of releases was identified. **12. Cereal Food Processors, Inc.** i. 1992 to Present	

	ii. Leases approximately 2.0 acres and associated structures at Slip 1 for a flouring mill. iii. Port property files iv. On November 23, 1992, during the course of performing a routine monthly inspection of the sewer lift station on the Cereal Foods leasehold, a Port plumber noticed a petroleum/organic odor. The sewer lift station was pressure washed and the material was pumped into a 55-gallon drum. The material was subsequently sampled and toluene and xylene were detected. **13. Ceres Marine Terminals, Inc.** i. 1991-1992 ii. Held a lease agreement for office, corral and warehouse space for storage of equipment for stevedoring activities at Pier 1, House 1. iii. Port property files iv. No documented evidence of releases was identified. **14.** (b) (6) **.** i. 1956-1984 ii. Leased the cafeteria building to operate a public cafeteria. iii. Port property files iv. No documented evidence of releases was identified. **15. City of Portland** i. & ii. Owned and operated the Terminal 4 property from 1917 to 1971. Activities that occurred on the Terminal 4 property during City CPD ownership included operation of the grain terminal (1920 to 1942), cargo handling and storage (including, but not limited to, liquid bulks, coal, ores and concentrates), property management, fireboat moorage, dredging and filling, and leasing areas to tenants. The City Bureau of Fire also moored its fireboat in Wheeler Bay from approximately 1960 until 1980. On November 14, 1975, the Port issued a permit to the City to install a 1,000 gallon diesel UST on the upland property adjacent to the moorage for Fireboat No. 3. The City was also granted an easement for sewer and water in 1975. In 1986 the Port granted City an easement for its stormwater Outfall 52C that traverses Slip 1. iii. Port property files	

	iv. During the City CPD's ownership of the Terminal 4 property, releases occurred from the UPRR pipeline. In addition, constituents consistent with coal, ore and concentrate materials that were handled during their period of ownership and operations have been identified in upland soil and river sediments. Lastly, impacts have been identified at the City CPD's septic systems and tanks that were historically in use at Terminal 4. Contaminants detected in City stormwater solids and water are consistent with contaminants in Slip 1 sediments. **16. CLD Pacific Grain, LLC** i. 2001 to 2003 ii. Held a sublease for the grain storage area. CLD Pacific Grain, LLC is a Pacific Northwest regional joint venture between Louis Dreyfuss Corporation and Cargill that was formed in 2001. iii. Port property files iv. No documented evidence of releases was identified. **17. CT&H Company** i. 1987 to 1990 ii. Leased warehouses for importing sheep through Terminal 4. In 1987, following livestock casualties during shipment, a quarantine area was established to autopsy the sheep and ensure public health and safety. At that time, the City of Portland issued an Industrial Waste Discharge Permit 400-021 to CT&H Company to discharge waste water from the quarantine area into the City sanitary sewer. Sheep carcasses from the area were incinerated at the Humane Society's site in North Portland under a Solid Waste Letter of Authorization from DEQ. iii. Port property records iv. No documented evidence of releases was identified. **18. Daiichi Chuo Kisen Kaisha/Trade Ocean Line** i. 1987 to 1989 ii. Held a terminal use agreement for loading/unloading break-bulk materials (mainly steel) destined for Puget Sound ports iii. Port property files iv. No documented evidence of releases was identified. **19. Dave Bush Productions (2000)**	

	i. 2000 ii. Held a permit and right-of-entry for a still photography shoot for Yamaha Motor Corp. iii. Port property files iv. No documented evidence of releases was identified. **20. Duluth Timber Company** i. 1999 ii. Held a permit and right–of-entry for the processing of timber from the Terminal 4 dismantling project at Pier 1. iii. Port property files iv. No documented evidence of releases was identified. **21. Eagle Flour Mills** i. 1919-1921 ii. Leased flouring mill north of Slip 1 for the storage of wheat. iii. Port property files iv. No documented evidence of releases was identified. **22. Elvalsons, Inc.** i. 1973-1974 ii. Leased 50,000 square feet of space (1.15 acres) at Terminal 4 near Slip 3 for importing commodities including ammonium sulfate. Elvalsons constructed a balloon building for storage of its imported commodities. Elvalsons removed the building at the termination of its lease. iii. Port property files iv. No documented evidence of releases was identified. **23. Festival Arts** i. 1976-1977 ii. Leased storage space in the transit shed to store parade float chassis. iii. Port property files iv. No documented evidence of releases was identified. **24. Flowers Three, Inc.** i. 1977 ii. Leased storage space in the transit shed to store parade float chassis.	

	iii. Port property files iv. No documented evidence of releases was identified. **25. Gerber Advertising** i. 1994 ii. Held a permit and right-of-entry for filming a television at House 4 at Pier 1. iii. Port property files iv. No documented evidence of releases was identified. **26. General Petroleum Corporation (now ExxonMobil)** i. 1922-1939 ii. Leased the UPRR oil dock, associated structures and pipeline for delivery of bunker fuel from vessels. iii. Port property files iv. The UPRR pipeline was in use beginning in the early 1900s and has a history of leaks and releases that impacted Slip 3. Some of these leaks and releases may have occurred during General Petroleum's lease. **27. Georgia Pacific** i. 1992 ii. Held a month-to month lease with PM-Ag for rental of a tank to store lignin. iii. Port property files iv. No documented evidence of releases was identified. **28. (b) (6) (also known as (b) (6))** i. 1923 to at least 1950 ii. Held a lease with the City CPD for construction and operation of a fumigation plant near the head of Slip 1 (south of the liquid bulk area) for fumigating cotton and other materials imported from Asia. iii. City CPD drawings and minutes iv. No documented evidence of releases was identified. **29. Hall-Buck Marine (now Kinder Morgan Bulk Terminals [KMBT])** i. 1987 to Present ii. Hall-Buck entered into a lease agreement with the Port on October 30, 1987 to construct and operate part of Terminal 4 for the import of pencil pitch, export of soda ash, bulk clay, and compatible mineral bulk products at Slip 3, Berths 410,	

	411 and 412. Hall-Buck also held a lease for the Dravo which terminated June 14, 1998. From March 9, 1988 to June 14, 1998, pencil pitch unloading was handled by Hall-Buck. As the operator, Hall-Buck had the obligation to maintain the leased premises, including keeping it free and clear of rubbish, debris and liter. Hall-Buck also assumed the obligation to modify, operate and maintain the Dravo and to clean up the dock during and after each unloading. KMBT currently leases Pier 4 and its adjacent area for loading of soda ash onto ships at Berths 410 and 411. KMBT utilizes a 5,000-gallon double-walled fiberglass diesel UST in the northwest corner of the pit/rail dump building, primarily to fuel locomotives. The UST is registered with DEQ File Number 9786 and is reportedly equipped with leak detection equipment. iii. Port property and environmental files. iv. Releases of pencil pitch occurred at the Slip 3 during the ten years Hall-Buck was handing the material and pencil pitch is an identified contaminant source in the upland soils and in-water sediments of Slip 3. Hall-Buck has also been cited by DEQ for violations for pencil pitch handling. Documented releases of pencil pitch into the air, onto the Terminal, and/or into the river include the following incidents/notifications: June 13, 1986; June 14, 1986; March 15, 1988; January 5, 1990; February 25, 1992; March 2, 1992; April 28, 1993; May 28, 1993; August 2, 1993; November 8, 1993; July 30, 1996; September 25, 1996; and June 18, 1997. See also response to Questions 22, 51 and 62. In addition, on July 27, 1992, approximately 0.12 gallons of diesel released to river from overfilling during fueling operations on the carrier ANSAC PROSPERITY at Hall-Buck at Berth 411. Sorbents were used to collect the product. On May 25, 2006 DEQ issued a Warning Letter Notice #WRN-NWR-WQ-2006-0090 to KMBT for violation of 340-045-0015(5)(c) and enforcement rule 340-012-0055(3)(e) violation of pH requirements by less than 0.5 pH.	

	30. Hudson Bear Contracting i. 1998 to 2000 ii. Held a permit and right-of-entry for removal of a locomotive. iii. Port property files iv. No documented evidence of releases was identified. **31. International Raw Materials, Ltd. (IRM)** i. 1995 to Present ii. IRM assumed PM-Ag's lease agreement in 1995. IRM currently leases the liquid bulk area at Slip 1 for storing, handling, and distributing bulk liquid and granular products. Products handled by IRM have included caustic soda, non-organic fertilizer, magnesium chloride, lignin, lignon-sulfonate, molasses products, tallow, propylene glycol, sulfate of potash, polyethylene, and vegetable oil. Currently, IRM is handling ammonium sulfate and urea ammonium nitrate (UAN) and uses berth 408 to unload these products. In 2007, the Port granted IRM a permit and right-of-entry for additional rail trackage at Terminal 4. During their lease, IRM allowed Univar (formerly ChemCentral) to use the leased property for weighing placard trucks. This arrangement was terminated in May 2009. iii. Port property files iv. On April 7, 1998, 10 tons of lignin foam was spilled at the IRM property. Approximately 8 tons of the material was recovered. **32. I.T.O. Stevedoring** i. 1986 to 1988 ii. Held lease agreement for use of gearlocker, storage and office space. Also provided supervision of stevedoring operations at Slip 3 in 1988. iii. Port property files iv. No documented evidence of releases was identified. **33. Jones Oregon Stevedoring** i. At least 1971 & 1979 to 1987. ii. Jones unloaded grain for Cargill in at least 1971. Jones unloaded pencil pitch at Berths 410 and 411 from at least 1979 to 1985 and one additional shipment in 1987 pursuant to annually-renewed contracts: The identified contracts include (but may not be limited to):	

	• Bulk Cargo Handling pencil pitch contract from July 1, 1980 through June 30, 1981; • Pencil pitch unloading contract for July 1, 1982 to June 30, 1983. Under the pencil pitch contract, Jones had to leave the berths shovel-clean following loading and fully comply with all regulations and requirements of DEQ and the Coast Guard, and follow twelve Port standard operating procedures (SOPs). The SOPs included the requirement that equipment operators must exercise extreme caution when loading or unloading bulk commodities to prevent spillage and wind-blown dust. Jones hired the longshoremen to unload the pencil pitch at vessels at Slip 3 consistent with the Port's long-term labor agreements regarding the use of longshore labor at marine terminals. The longshoremen unloaded the pencil pitch with the Dravo crane at Berth 411. In addition, Jones had bulk loading contracts with the Port for Pier 5 Berth 412. Jones had a bulk cargo loading contract with the Port from July 1, 1982 to June 30, 1983. Strict compliance with dust emissions controls and noise control was imposed by the Port on stevedores' Berth 412 loading operations and any resulting DEQ citations or penalties would be passed on to the stevedore. Under the Berth 412 contract, Jones had to follow the Port's standard operating procedures, leave the berths "broom and shovel" clean following loading and fully comply with all regulations and requirements of DEQ and the Coast Guard. iii. Port property files iv. Releases of pencil pitch occurred during the unloading of vessels and the subsequent shovel cleanup of the docks during the years Jones provided vessel unloading services and pencil pitch is an identified contaminant in the upland soils and in-water sediments of Slip 3. Some of those releases occurred during Jones' unloading operations; documentation is included at Tab 7. Releases included, but were not limited to, a release on: • October 16, 1987, when pencil pitch was spilled into the Willamette while Jones was unloading the vessel PARKGRACHT. See also responses to 22, 51, and 62 for a listing of pencil pitch related releases. In addition, the	

	following releases by Jones were identified: • June 7, 1989, Jones Oregon Stevedoring Company was observed dumping "oily" material outside the gearlocker at Terminal 4. The material was sampled and analyzed. Based on the lab results, the material was determined to be some type of degreasing solution ("safety solvent"). • On December 19, 1971, according to a Coast Guard report, Jones Stevedoring and Cargill released grain into the Willamette River at Pier 1. **34. Koppers Company, Inc. (Beazer East, Inc.)** i. Approximately 1984 to 1988 ii. Owner of the pencil pitch that was imported and handled at Terminal 4. As owner of the pencil pitch, Koppers Company, Inc. arranged to have the pencil pitch off loaded at Terminal 4 and can be assumed to have entered into the arrangement to unload the pencil pitch from vessels at Terminal 4 with the knowledge and intention that at least a portion of the material would be lost and disposed of during the transfer process, as was common practice. Koppers was responsible for hiring the truck transporters (two known entities were Sunrise Express and Dave Obrist Trucking and Excavating). iii. Port property files iv. Releases of pencil pitch occurred at Slip 3 during the 1984 to 1988 period when Koppers Company, Inc. imported pencil pitch through Terminal 4 and pencil pitch is a known contaminant in the uplands and in-water sediments of Slip 3. Documentation is included in Tab 5 and Tab 7. See responses to Questions 22, 51 and 62. **35. Koppers, Inc.** i. Approximately 1989 to 1998 ii. Owner of the pencil pitch that was imported and handled at Terminal 4. As owner of the pencil pitch, Koppers, Inc. contracted to have the pencil pitch off loaded at Terminal 4 and can be assumed to have entered into the arrangement to unload the pencil pitch from vessels at Terminal 4 with the knowledge and intention that at least a portion of the material would be lost and disposed of during the transfer process, as was common practice. iii. Port property files	

	iv. Releases of pencil pitch occurred at Slip 3 during the 1989 to 1998 period when Koppers, Inc. imported pencil pitch through Terminal 4 and pencil pitch is a known contaminant in the uplands and in-water sediments of Slip 3. Documentation is in Tab 5 and Tab 7. See responses to Questions 22, 51 and 62**.** **36. La Grande Industrial Supply Co.** i. 1962 ii. Unknown space at Pier 4. iii. Port property files iv. No documented evidence of releases was identified. **37. Lakeside Production Company** i. 1994 ii. Held a permit and right-of-entry for Pier 1, House 1 for the purpose of shooting a live action film. iii. Port property files iv. No documented evidence of releases was identified. **38. Mado Productions, Inc.** i. 1999 ii. Held a permit and right-of-entry Berth 408 for the purposes of filming a television production or taking still photography. iii. Port property files iv. No documented evidence of releases was identified. **39. Martin Marietta Aluminum** i. 1974 to 1982 ii. Owner of the pencil pitch that was imported and handled at Terminal 4. As owner of the pencil pitch, Martin Marietta contracted to have the pencil pitch off loaded at Terminal 4 and can be assumed to have entered into the arrangement to unload the pencil pitch from vessels at Terminal 4 with the knowledge and intention that at least a portion of the material would be lost and disposed of during the transfer process, as was common practice. iii. Port property files iv. We know that numerous releases of pencil pitch were observed at Slip 3 from the mid-1980s to 1998. Martin Marietta Aluminum imported pencil pitch from 1974	

	to 1982. The importing of pencil pitch during this period was subject to the same handling process and equipment as the later period and thus it can be safely assumed that pencil pitch was released to the river as it was during the later period. **40. Matson Navigation Company (Matson Line)** i. 1922-1982 ii. Matson operated a freight dock at Pier 2, Slip 1 from 1946 to 1982, pursuant to lease agreements first with the City CPD and later the Port. The lease agreements provided that Matson vessels would be loaded and unloaded by Matson's stevedore. Space used for the operations included Warehouses 1 and 2 located southwest of Pier 2, a shedded dock, and an open dock area. Matson's operations included break-bulk and containerized cargo. Matson's agreements provided for preferential berthing at Pier 2 from 1946 and provided for exclusive use of a paved portion of the yard south of Pier 2. Matson was also given preferential assignment of a gearlocker building at the east end of Pier 2 and use of a gasoline pump and tank in 1964. Based on its lease agreements, it appears that Matson conducted its own stevedoring services and may have performed all stevedoring services for Pier 2 during some or all of its lease period. Matson used space at Terminal 4 until expiration of the agreement in March 1982, at which time it transferred its container operations to Terminal 6 and discontinued the shipment of liquid molasses. iii. Port property files iv. On September 26, 1991, a leaking drum with asphalt related material was observed in the Matson Warehouse at Pier 2, Slip 1. The Port characterized the material and properly disposed of the drum. **41. Mitsui & Co.** i. 1967 to 1976 ii. Held a preferential berthing agreement for use of Berth 2 at Pier 4 and Berth 410 and the whirley crane to load logs on vessels. iii. Port property files.	

	iv. No documented evidence of releases was identified. **42. Multnomah County Division of Public Safety (Sheriff's Department River Patrol)** i. 1980 to 1995 ii. Had an agreement to operate and maintain the Harbor Patrol Boathouse and Office at Wheeler Bay. Operated a boathouse for patrol of the harbor. Associated structures included a 1,000-gallon diesel UST used for fueling County vessels. The UST was decommissioned by removal in 1995. iii. Port property files iv. No documented evidence of releases was identified. **43. Nike Inc.** i. 1999 ii. Held a permit and right-of-entry for taking photographs at the IRM leasehold. iii. Port property files iv. No documented evidence of releases was identified. **44. Northwestern Ice and Cold Storage Company.** i. At least 1945 ii. Held a lease with the War Department for the Ventilated Warehouses (No. 6 and 7) adjacent to Pier 1. iii. Port property files iv. No documented evidence of releases was identified. **45. Northwest Natural Gas Company** i. 2005 to Present ii. Held an easement for construction, installation, operation, maintenance, replacement, reconstruction, and removal of natural gas pipeline. iii. Port property files iv. No documented evidence of releases was identified. **46. Oregon Sulfur Company** i. At least 1920 ii. Unloading and storage of bulk sulfur at Pier 5. iii. City CPD maps and minutes iv. No documented evidence of releases was identified. **47. Oregon Terminal Company**	

	i. 1988 to 1996 ii. Under a management agreement in 1988, Oregon Terminal Company (OTC) took over all operations at Pier 2. This included the operation of all break-bulk berths. OTC handled Berth 408, the ro-ro dock, and associated warehouses. In addition, OTC operated the old Quaker State building as a gearlocker. A rail-covered work pit was constructed west of the gearlocker building at that time. In addition, one 4,000-gallon UST for diesel and one 4,000-gallon UST for gasoline were installed with a fueling station on the south side of the gearlocker building. An equipment wash station was installed on the slip side of the building; the wash station drained to the sanitary sewer. Both the USTs and the wash station were removed when the management agreement ended in 1996. iii. Port property files iv. On April 5, 1995, during the course of performing an annual inspection of the OTC leasehold, dark patches in the gravel were observed. On May 4, 1994, OTC reported a release at its gearlocker of about 40-50 gallons of diesel fuel into their steam cleaner sump tank. Spencer Environmental pumped out the sump tank on May 6, 1994. **48. Oregon-Washington Railroad & Navigation Company (OWR&N)** i. 1906 to 1988 ii. Prior property owner and operated rail trackage at Terminal 4. OWR&N Co., along with UPRR, also signed a (sub)lease with the U.S. on November 4, 1942 allowing the U.S. to construct and use two footpath crossings over the railroads' tracks and right-of-way. Construction of the footpaths also included installation of 12-inch culverts. The footpaths were for use by pedestrians only to access the U.S.-leased properties at Terminal 4. The lease was canceled September 30, 1946. OWR&N along with UPRR were granted the right and authority to repair the face of Pier 5 and install a lateral pipeline from the water terminus of the existing pipeline in 1941 and an easement for the construction, use, operation, maintenance, repair, renewal and replacement of the petroleum product pipeline in 1970. In 1977, the two companies entered into an agreement to construct, maintain and use a private roadway at Terminal 4 and had the right to construct,	

	maintain, and use the area between the rails of tracks and the right of way. In 1988, the railroads granted an easement to the Port to install and maintain an access road and necessary lighting installations. iii. Port property files iv. The UPRR pipeline was in use beginning in the early 1900s and has a history of leaks and releases that impacted Slip 3. OWR&N is a UPRR affiliate and it is likely leaks and releases occurred during their period of operations. **49. Pacific Molasses (also known as PM-Ag)** i. 1947 to 1995 ii. Leased 2.54 acres at Slip 1 for storing, handling, and distributing bulk liquid products (caustic soda, phosphoric acid, non-organic fertilizer, magnesium chloride, lignon-sulfonate, molasses products and animal vegetable oil) and retained maintenance responsibilities for above ground storage tanks used for storage of materials. On July 1, 1953, PM-Ag took over operations of material storage at tanks 10 and 11. iii. Port property files iv. In approximately 1984, a 300 to 400 gallon leak of liquid fertilizer occurred from tank #16 on Parcel 1. All but 5 to 10 gallons of the material was recovered. On April 25, 1989, 10 gallons of tallow was released from a ship line into Slip 1. The Coast Guard subsequently issued a Notice of Federal Interest in a Pollution Incident to Pacific Molasses for the release. On January 16 and 24, 1985, releases of ammonium nitrate solution fertilizer were observed from Tanks 10 and 7, respectively, on the PM-Ag leasehold. Approximately 4.66 tons were released during the two incidences. **50. Pacific Northwest Bell Telephone** i. At least 1987 ii. Held an easement for underground communication lines and an above ground cabinet. iii. Port Agreement and Contract files iv. No documented evidence of releases was identified. **51. Pacific Railroad Preservation Association** i. 1994 to 1997	

	ii. Held a permit and right-of-entry for storage of one locomotive and eight railcars prior to permanent storage. iii. Port Agreement and Contract files iv. No documented evidence of releases was identified. **52. Pacific Power & Light** i. At least 1972 ii. Held an easement for continued operation of a 115 kv electric transmission line. iii. Port Agreement and Contract files iv. No documented evidence of releases was identified. **53. Portland Rose Festival Association** i. 1973, 1974 ii. Held a contractual agreement for Terminal 4 building space for construction of parade floats. iii. Port Agreement and Contract files iv. No documented evidence of releases was identified. **54. Peninsula Terminal Company** i. 1999 ii. Held a permit and right–of-entry to use the rail car pit at the Gearlocker Building at Slip 3 for the maintenance of the locomotive leased to Kinder Morgan. iii. Port Agreement and Contract files iv. No documented evidence of releases was identified. **55. Portland Seafarers Mission** i. 2003 to 2008 ii. Held a permit and right-of-entry for storage space in the administration building. Portland Seafarers Mission's operations were related to providing services to seamen arriving in Portland aboard merchant marine vessels. iii. Port Agreement and Contract files iv. No documented evidence of releases was identified. **56. Portland Stevedoring Company** i. At least 1957 to 1972 ii. Provided stevedoring (unloading/loading) services to vessels. iii. Port property files	

	iv. On November 9, 1971, Portland Stevedoring released bauxite ore into the Willamette River while unloading the MARABU PORR at Pier 2. On December 6, 1971, according to a Coast Guard report, a release of bauxite occurred from Portland Stevedoring unloading operations at Pier 2. **57. Quaker State Oil Refining Co. of California (now SOPUS Products)** i. 1953 to 1985 ii. Leased land at the head of Slip 3 for an oil packaging business. In 1953, Quaker State constructed an oil packaging (motor oil bottling) plant at the head (to the east) of Slip 3. The plant included an underground transfer pipeline, three 220,000-gallon tanks, one 42,000-gallon tank, four 10,000-gallon tanks, a main blending and bottling building, and a storage building. Bulk oil was brought in via railcars on the north side of the plant or via ships berthed at Pier 5, Berth 412. The oil was pumped directly to the tanks from the railcars or directly from vessels into the transfer pipeline that traversed from Pier 5 to the eight ASTs. The tanks, which were located west of the packaging plant building, were connected to the packaging plant via pipeline. Quaker State bottled motor oil in 1-quart containers; some of the oil was blended at the plant with detergent and with motor oils of different weights. Once the oil was packaged, it was loaded onto trucks or railcars via a spur track on the north side of the packaging plant. Port drawings indicate that Quaker State also utilized a waste oil UST, a diesel UST, a gasoline UST and a used oil AST located southeast of their main blending and bottling building. Quaker State continued its operations through 1985, when the ASTs and the abandoned underground pipeline were removed. The waste oil UST was decommissioned in 1991 and the gasoline and diesel USTs were removed in 1996. The used oil AST has been removed, but the date of removal has not been confirmed. See also the response to Question 13(j) below. iii. Port property files iv. Soil samples collected during the waste oil UST decommissioning in 1991 revealed detections of diesel and oil range petroleum hydrocarbons. Approximately 5 cubic yards of impacted soil was removed; however, the proximity of the building prevented the removal of additional soil. Some residual	

	impacted soil remains in place adjacent to and possibly beneath the building (presently the gearlocker). Follow-up sampling was conducted in 1995 to evaluate the extent of impacted material that remains in place in this location. It was concluded that approximately 17 cubic yards of petroleum impacted soil remains in place. During the decommissioning of the gasoline and diesel USTs in 1996, approximately 5 tons impacted soil was removed. On April 21, 1993, during an inspection of the Quaker State leasehold, an accumulation of oil on the railroad tracks was noted. Approximately 150 feet of track needed to be cleaned off. Quaker State operated a pipeline at the head of Slip 3 for over-water transfer of bulk oil for 32 years. In 1993, the U. S. Coast Guard took samples of oil seeping into the head of Slip 3 adjacent to the Quaker State pipeline and identified lubricating oil. Based on this evidence, the Federal District Court of Oregon found in Port v. UPRR, Case No. 98-886-PA that Quaker State's operations contributed to the hydrocarbon contamination of Slip 3 by causing motor oil to reach the sediment. **58. Qwest Corporation** i. 2005 to Present ii. Holds an easement to install, operate, maintain and remove aerial and underground telecommunications lines and equipment. iii. Port property files iv. No documented evidence of releases was identified. **59. Restaurant Consultants, Inc.** i. At least 1978 ii. Leased storage space in transit shed at Pier 1. iii. Port property files iv. No documented evidence of releases was identified. **60. Richfield Oil Company (now ARCO/BP)** i. At least 1948 ii. Held an agreement with the City CPD to operate the oil dock at Pier 5.	

	iii. Port property files iv. The UPRR pipeline was in use beginning in the early 1900s and had a history of leaks and releases that impacted Slip 3. Some of these leaks and releases may have occurred during Richfield Oil's lease with the City CPD. **61.** (b) (6) i. Unknown to 1906 ii. Prior property owner. Operations unknown. iii. Port property files iv. No documented evidence of releases was identified. **62. Rogers Terminal and Shipping (a division of Cargill Marine and Terminal, Inc.)** i. 1982 to Present ii. A terminal service company that provided stevedoring service for Cargill's operation at the grain complex. Rogers currently leases office space, warehouse storage, a shop and gearlocker. A 10,000-gallon gasoline UST was decommissioned at the Rogers Terminal leasehold in 1990. See also the response to Question 13 (j). iii. Port property files. iv. In 1989, following removal of an AST, stained soil was observed at the Rogers leasehold. In 1997, Rogers removed stained soil from their leasehold. **63. Salmon Bay Barge Lines** i. 2003 to Unknown ii. Held an agreement to dock a vessel at Berth 405 during November 2003. iii. Port property files iv. No documented evidence of releases was identified. **64. Salvage Contractors, Inc.** i. 2001 to 2003 ii. Held a permit and right-of-entry to remove a locomotive, and dismantle the Whirley Crane at Berth 415 and Hitachi Crane at Berth 410. iii. Port property files iv. No documented evidence of releases was identified. **65. Schnitzer Investment Co.** i. At least 1978, 1992	

	ii. Held an agreement with the Port to allow vessels moored at Schnitzer to overhang on Port's submerged property at Berth 401. In 1992, Schnitzer discharged water from a dredging event onto Terminal 4 without the Port's consent. Information regarding resolution of the issue was not found in the Port's records. iii. Port property files iv. No documented evidence of releases was identified. **66. Schnitzer Steel Products Company** i. 1961to 1962 ii. Held a sublease for the PM-Ag leasehold to store scrap metal. iii. Port property files iv. No documented evidence of releases was identified. **67. Stevedoring Services of America (SSA) (previously known as Brady Hamilton Stevedore Company)** i. 1974 and at least 1985 to 1987 ii. Stevedoring Services of America was the stevedore for at least 10 pencil pitch vessel unloadings between September 1985 and December 10, 1987 for a total of at least 64,955 short tons. In addition, in 1974, predecessor Brady-Hamilton Stevedore Company leased Machinery Shed at Berth 412 for storage of lift machines and stevedore gear. iii. Port property files iv. The handling of pencil pitch at Terminal 4 is well documented and a known source of contamination the upland area and in-water sediments of Slip 3. Releases of pencil pitch occurred during the unloading of vessels and the subsequent shovel cleanup of the docks during the years SSA provided vessel unloading services. See responses to questions 22, 51 and 62. In addition, on August 4, 1983, while unloading soda ash from the M/V OCEAN, the Union Pacific switch crew created an accident that caused spillage of approximately 12 tons of soda ash from a car being discharged at the hopper. The cargo was under control of the stevedore company since it was being discharged from the railcar to the hopper. **68. Standard Oil Company (now Chevron)** i. 1969 to 1984 ii. Operated the oil storage and distribution property in the Slip 3 area for UPRR.	

	iii. Port property files iv. Prior to the Port's ownership, between November 13 and December 15, 1970, UPRR discovered and repaired five leaks in its underground pipeline. On December 15, 1970, a leak occurred during Union Pacific's pipeline repairs and oil flowed through the sand and escaped into the water. In 1971, UPRR abandoned the pipeline because of leaks and later installed a replacement line that ran parallel to the former one. On December 28, 1971, Portland Harbor Police observed slightly colored to brightly colored oil slick on the water between Piers 4 and 5. The slick covered an area approximately 500 feet wide and 1000 feet long. The oil was heaviest under the southeast end of Pier 5. Employees of UPRR were attempting to clean up the oil with booms and other absorbent materials. Approximately 50 feet of the abandoned pipeline was excavated on October 13, 1993 to observe the condition of the pipeline and test for leaks. The pipeline was tested by filling it with water and maintaining pressure for 20 minutes. When the water supply pressure was removed, the pressure in the pipeline decreased to zero within 5 minutes. The rapid pressure drop indicated that the pipeline was leaking at some point other than the excavated section. The northern pipeline was excavated and removed in May and June 1998 to facilitate the investigation of historical pipeline leaks and to assess the impact to soils adjacent to and beneath the former pipeline. The details of UPRR's ownership and Chevron's operation of the pipeline at and in the vicinity of Terminal 4 Slip 3 was the subject of federal court litigation (Port v. UPRR, Case # 98-886-PA, Or. D. Ct.). Documentation is provided at Tabs 5 and 7. **69. Star Shipping A/S (Star)** i. 1988 to 1995 ii. Held a terminal use agreement to dock at Terminal 4 and could use the premises within the capabilities of the terminal. No additional information was available. iii. Port property files iv. No documented evidence of releases was identified.	

	70. Stauffer Chemical Company i. 1971 to 1972 ii. Owner of bauxite ore that was unloaded by Portland Stevedoring Company at Pier 2. iii. Port property files iv. On November 9, 1971, Portland Stevedoring released bauxite ore into the Willamette River while unloading the MARABU PORR at Pier 2. **71. Storch Corporation/Engineers** i. 1975 to 1976 ii. Leased office space in the administration building for engineers working on Cargill's grain operation modernization project iii. Port property files iv. No documented evidence of releases was identified. **72. Terminal Flour Mills (subsidiary of Cereal Food Processors, Inc.)** i. 1921-1992 ii. Leased 2.0 acres and associated structures at Slip 1 for the milling of grain into flour north of Slip 1. iii. Port property files iv. No documented evidence of releases was identified. **73.** (b) (6) i. 1995 ii. Rented a secure, fenced area within House 1. iii. Port property files iv. No documented evidence of releases was identified. **74. Tidewater Barge Lines, Inc.** i. 1999 ii. Held a permit and right-of-entry to complete repairs to Berth 401 after their barge damaged bent #1 and adjacent catwalk. iii. Port property files iv. No documented evidence of releases was identified. **75. Union Chemical Company** i. 1985	

	ii. Used Tanks 6, 7 and 10 at the Liquid Bulk Storage Area for storage of ammonium nitrate solution fertilizer under Pacific Molasses lease. iii. Port property files iv. A leak from the base of Tank 10 was observed January 16, 1985. On January 24, 1985 a leak from the bottom plate was observed at Tank 7. A total of 4.66 tons of ammonium nitrate solution fertilizer was released between the two incidents. The tanks were repaired and it was not documented whether the spill reached the river or what the cleanup efforts were. **76. Union Pacific Railroad (UPRR)** i. 1906 to 1983; easement for railroad tracks at the property continues to present. ii. Beginning in at least 1906, UPRR began operating an oil fuel transfer pipeline. The 10-inch steel pipeline was used to transfer diesel, No. 6 fuel, and Bunker C oil from marine vessels at the UPRR oil dock to bulk storage tanks located east of Slip 3 in what was referred to by UPRR as the St. John's Tank Farm. In addition to operating the oil dock on the river side of Terminal 4, UPRR held an agreement for the preferential right to use Berth 412 at Pier 5 for its oil unloading operations and rental of office space. UPRR was also a prior property owner; they sold 19.64 acres to the City CPD in 1948. UPRR and OWR&N were granted the right and authority to repair the face of Pier 5 and install a lateral pipeline from the water terminus of the existing pipeline in 1941 and signed a (sub)lease with the U.S. on November 4, 1942 allowing the U.S. to construct and use two footpath crossings over the railroads' tracks and right-of-way. Construction of the footpaths also included installation of 12- inch culverts. The footpaths were for use by pedestrians only to access the U.S.-leased properties at Terminal 4. The lease was canceled on September 30, 1946. In 1952, UPRR was granted use of track 10½ for cleaning and washing of railcars prior to reloading. In 2004, UPRR was granted an agreement to use rail trackage at Terminal 4 and in 2006, entered into an agreement for additional trackage. In association with its track usage, UPRR does some locomotive refueling at Terminal 4.	

	iii. Port property files iv. Prior to the Port's ownership, between November 13 and December 15, 1970, UPRR discovered and repaired five leaks in their underground pipeline. On December 15, 1970, a leak occurred during Union Pacific's pipeline repairs and oil flowed through the sand and escaped into the water. In 1971, UPRR abandoned the pipeline because of leaks and later installed a replacement pipeline that ran parallel to the former one. On December 28, 1971, Portland Harbor Police observed slightly colored to brightly colored oil slick on the water between Piers 4 and 5. The slick covered an area approximately 500 feet wide and 1000 feet long. The oil was heaviest under southeast end of Pier 5. Employees of UPRR were attempting to clean up the oil with booms and other absorbent materials. Approximately 50 feet of the abandoned pipeline was excavated on October 13, 1993 to observe the condition of the pipeline and test for leaks. The pipeline was tested by filling it with water and maintaining the pressure for 20 minutes. When the water supply pressure was removed, the pressure in the pipeline decreased to zero within 5 minutes. The rapid pressure drop indicated that the pipeline was leaking at some point other than the excavated section. The northern pipeline was excavated and removed in May and June 1998 to facilitate the investigation of historical pipeline leaks and to assess the impact to soils adjacent to and beneath the former pipeline. During the years of operation of the St. Johns Tank Farm, UPRR and its leases discharged oil-contaminated storm water into drainage that traversed Terminal 4 and discharged directly to the Willamette River to the south of Slip 3. The details of UPRR's ownership and operation of the oil terminal, transportation and storage property at and in the vicinity of Terminal 4 Slip 3 was the subject of federal court litigation (Port v. UPRR, Case # 98-886-PA, Or. D. Ct.). Documentation is provided at Tabs 5 and 7.	

	On August 4, 1983, while loading the M/V GREAT OCEAN, a UPRR switch crew tipped over a railcar and caused approximately 12 tons of soda ash to spill from a car being discharged at the hopper. Brady-Hamilton cleaned up the spill. Documentation is provided at Tabs 5 and 7. On December 21 and 28, 2006 during a Port environmental inspection, heavy oil stains were observed between rail tracks 704 through 708. Tracks 704 and 708 are located southeast of the grain facility. Several railroad tracks are still present at the terminal and UPRR maintains an easement to operate these tracks. **77. United States (Army Transport Service and Army Corps of Engineers)** i. 1941 to 1947 ii. The U.S. Secretary of War notified the City CPD in December 1941 that the War Department needed Terminal 4 to augment other port operations on the West Coast. The City CPD subsequently executed a lease agreement with the U.S. on January 1, 1942 for the use of Terminal 4 as the Army Transport Service's Sub-Port of Embarkation to the Seattle District. The lease was amended later the same year to clarify that movement of ammunition or explosives through the terminal would only be moved through Pier 5. Reports indicate ammunition was moved through Terminal 4 by the U.S. at various times during its tenancy. The U.S. also executed a (sub)lease with UPRR and OWR&N Co. on November 4, 1942 that allowed the U.S. to construct and use two footpath crossings over the railroads' tracks and right-of-way. Construction of the footpaths also included installation of 12- inch culverts. The footpaths were for use by pedestrians only to access the U.S.-leased properties at Terminal 4. The lease was canceled on September 30, 1946. In 1942, the U.S. also entered into a contract with the Gilpin Construction Company to dredge about 100,000 cubic yards from Slips 1 and 3. Dredging of Slip 1 began in December 1942, but available documentation does not confirm	

	dredging of Slip 3. The first carload of cargo assigned by the Army Transport Service arrived at Terminal 4 on November 4, 1941, before the relationship between the U.S. and the City CPD was formalized. U.S. operations during the lease included use of a fumigation (delousing) plant for troops and prisoners of war (POWs), a gas station on Carroll Road that utilized a 10,160-gallon tank (above or below ground not known), shop space, a fire station and various buildings. The U.S. also established a small salvage yard for scrap metal (including scrap iron and ferrous metal) and rubber. A report from March 1943 noted the sale of more than 38,000 pounds of scrap iron and steel from salvage operations. The total tonnage of materials scrapped at the terminal during the U.S. Army Transport Service's tenure was close to 350 tons, with most of that sold in 1944. Aerial photos indicate the salvage area was filled by 1945. In 1944, the U.S. installed an auxiliary pipeline at Pier 5, Slip 3. The auxiliary line connected to the main UPRR pipeline and its terminus was reportedly supported by two standpipes adjacent to the slip. The new line was built to permit tankers to discharge oil while other ships took on coal from the adjacent bunkers. Available documentation indicates the U.S. also handled 229 barrels of diphenylamine through Terminal 4. The Army Corps of Engineers (Corps) oversaw new construction and rehabilitation of existing structures and relinquishment of the terminal to the City CPD. During U.S. occupancy, the Corps repaired and/or rehabilitated several structures at the Terminal including Piers 1, 2, and 5. Specifically, the Corps rehabilitated the loading apron at Pier 1, replaced decking and rehabilitated railroad trackage at Pier 2, and rehabilitated the slip side of Pier 5. In 1943, 22 miles of rail trackage was constructed and/or repaired under the War Department. The U.S. classified the Sub-Port of Embarkation as surplus in March 1946. That designation included all improvements or alterations constructed by the U.S.	

	during its tenure. The City CPD and the U.S subsequently engaged in lengthy discussions concerning the restoration/rehabilitation of Terminal 4 prior to its return to the City CPD. Finally, in July 1947, the City CPD approved a compromise where the U.S. would pay $50,000 to settle all claims against it at Terminal 4. The U.S. agreed to relinquish equipment, supplies, and structures to the City CPD. The City of Portland then released the U.S. from the provisions of City Ordinance No. 78210 on February 16, 1948. iii. Port property files iv. No documented evidence of releases was identified. **78.** (b) (6) i. 1919 ii. Leased a portion of Terminal 4 south of Slip 1 to install and operate a grain, food product, milling and feed industry. iii. Port property files iv. No documented evidence of releases was identified. **79. W.R. Grasle Company** i. 1989 to 1990 ii. Held a contract for electrical rehabilitation at Terminal 4. iii. Port contract and environmental files iv. On April 25, 1989, Grasle caused a release of approximately 35 gallons of PCB-containing fluid at the Pier 4, Berth 411 electrical substation. The spill was contained within the transformer room inside the utility tunnel. A cleanup was conducted by Riedel Environmental Services under EPA oversight. **80. Weyerhaeuser Timber Company** i. At least 1906 ii. Held an easement to extend and maintain slopes of cuttings or embankments. iii. Port property files iv. No documented evidence of releases was identified. **81. Wieden and Kennedy** i. 1997 ii. Held a permit and right-of-entry for an advertising shoot along the dock at Slip 1. iii. Port property files	

	iv. No documented evidence of releases was identified.	
12. If not included in response to any of the previous questions, please describe the purpose and duration of each aquatic lands lease Respondent or the operator of Respondent's Property(ies) ever obtained from the State of Oregon and provide a copy of each application for and aquatic lands lease obtained.	In 1995, the Port obtained a lease with the State of Oregon Department of State Lands (ML-10321) for 0.423 acres of submerged land in Wheeler Bay for storage of Carr Marine's tugs, barges and marine-related equipment. The lease with DSL was canceled in 1999 when Carr Marine terminated its lease at Terminal 4. In 2004, the Department of State Lands entered into an agreement with the Port for access to DSL-owned land adjacent to Terminal 4. The access agreement allows the Port to conduct in-water work required under the Port's Administrative Order on Consent for the Early Action at Terminal 4.	See property transaction records at Tab 5.

Section 3.0 - Description of Each Property		
13. Provide the following information about each Property identified in response to Question 4:	See response to bullets (a) through (m) below.	
a. property boundaries, including a written legal description;	A legal description of the tax lots comprising the Terminal 4 property is included in the deeds for the property, which are located at Tab 2.	See deeds and easements at Tab 2.
b. location of underground utilities (telephone, electrical, sewer, water main, etc.);	Since the Port acquired Terminal 4 in 1971, the property has been served by the following utilities: • City of Portland (water and sewer) • Northwest Natural (natural gas) • Pacific Power & Light (electricity) • Portland General Electric (electricity) • Qwest (telephone) See response to Question 6 (d) for utility easement information.	See drawings and maps at Tab 3. See property transaction records at Tab 5.
c. location of all underground pipelines whether or not owned, controlled or operated by you;	UPRR historically operated a petroleum pipeline that traversed Terminal 4. The 10-inch steel pipeline was used to transfer diesel, No. 6 fuel, and Bunker C oil from marine vessels to bulk storage tanks located east of Slip 3. In 1971, UPRR abandoned the pipeline because of leaks and later installed a replacement pipeline that ran parallel to the former one. Approximately 50 feet of the abandoned pipeline was excavated on October 13, 1993 to observe the condition of the pipeline and test for leaks. The northern pipeline was excavated and removed in May and June 1998 to facilitate the investigation of historical pipeline leaks and to assess the impact to soils adjacent to and beneath the former pipeline. The details of UPRR's ownership and operation of the oil terminal, transportation and storage plant at and in the vicinity of Terminal 4 Slip 3 was the subject of federal court litigation.	See deeds and easements at Tab 2. See drawings and maps at Tab 3. See property transaction records at Tab 5.

	(Port v. UPRR, Case # 98-886-PA, Or. D. Ct.). In 1944, the U.S. Army Transport Service completed construction of an auxiliary pipeline at Pier 5 at Slip 3. The pipeline extended 340 feet to slip side of the pier. The Army also constructed two standpipes adjacent to the slip to accommodate the auxiliary pipeline. The new line was built to permit tankers to transfer oil to upland tanks while other ships took on coal from adjacent bunkers. No additional information was available on the auxiliary pipeline. Quaker State operated a motor oil blending and bottling plant at the head of Slip 3 from 1953 to 1985 which included an underground transfer pipeline. The pipeline was used to transfer bulk oil from vessels berthed at Pier 5 to Quaker State's tank farm on the upland. The Quaker State pipeline was removed in 1985. Two 8-inch pipelines were added for the liquid bulk operation at Pier 1 in 1989. In 1997, the liquid bulk operation pipeline was rebuilt at Pier 2 under Berth 408. All of these pipelines currently serve the IRM leasehold and are used to transfer liquid bulk materials from vessels to the IRM's storage tanks. The City of Portland and Multnomah County operated a fire boat station at Wheeler Bay from approximately 1960 through 1995. As part of operations, the fireboat moorage utilized a 1,000-gallon gasoline UST for refueling vessels. The UST system included an underground pipeline that went from the UST on the upland out to the dock structure. The UST was decommissioned in 1995 and subsequently received a No Further Action (NFA) determination from DEQ. Underground pipelines associated with water lines, sanitary sewer and storm systems are described in response to Question 13 (b) above and Question 13 (i) below and contained in drawings and maps at Tab 3.	See supplemental records at Tab 9.
d. surface structures (e.g., buildings, tanks, pipelines, etc.);	The Terminal 4 Slip 1 area is currently developed with the following: • Grain complex (former Cargill leasehold, currently vacant) – includes a grain elevator (also called the operating house), longshoremen lunchroom, truck shed, C10 building,	See agreements and contracts at Tab 1.

	an office, storage annex, track shed, truck dumper, car tipper, pellet mill and a gearlocker; • Liquid bulk storage area – includes a pump house, office building, oil scale house, truck scales and warehouses (currently leased by IRM); • Flour mill (currently leased by Cereal Foods); • Warehouse, gearlocker and a shop (currently leased by Rogers Terminal); • Industrial spur tracks to the grain plant, Cereal Foods and IRM; • Administrative office building (currently vacant); and • Security guard building. The Terminal 4 Slip 3 area is currently developed with the following: • Soda ash operation – currently leased by Kinder Morgan Bulk Terminals (KMBT) and includes railroad tracks, conveyor system with associated buildings, a 30,000-metric-ton storage building, and a maintenance warehouse with offices. The following aboveground storage tanks (ASTs) are present at the leasehold: 500-gallon steel AST for used oil, 500-gallon steel AST for gasoline, 330-gallon poly tote for sulfuric acid, and 10,000- and 15,000-gallon ASTs for washwater. In addition, a 5,000-gallon fiberglass diesel underground storage tank (UST and 43,000-gallon concrete retention pond are present at the leasehold; • Dravo bulk unloader on Pier 4 (no longer in use); • Gearlocker building – currently used by Marine Facilities Maintenance for storage of a boat and asphalt paving equipment; and • Rail trackage - crosses the northern and eastern portions of Terminal 4. A detailed history of the construction and removal of surface structures at the Terminal 4 Area is included in response to Question 13 (k).	See property transaction records at Tab 5. See supplemental records at Tab 9.
e. over-water structures (e.g., piers, docks, cranes, etc.);	Currently, over-water structures at the Terminal 4 property include five berths (Berths 401, 405, 408, 410, and 411). Berth 401 is located on the river side of the Terminal, northwest of Slip 1. Within Slip 1, there are two piers (Pier 1 and Pier 2) with two berths (405 and 408). On the north side of Slip 3, Pier 4 has two berths (410 and 411). Although no longer in use, the Dravo	See agreements and contracts at Tab 1. See drawings and

	bulk unloader is located on the deck side of Pier 4. A detailed history of over-water structure construction and removal is included in response to Question 13 (k).	maps at Tab 3. See aerial photographs at Tab 4. See supplemental records at Tab 9.
f. dry wells;	Two dry wells were constructed east of Berth 401 in 1999 for stormwater discharge. A dry well east of Slip 1 was identified on a 1971 property map and was confirmed in the field on August 25, 2011.	See drawings and maps at Tab 3.
g. treatment or control devices (e.g., surface water. air, groundwater, Resource Conservation and Recovery Act (RCRA), Transfer, Storage, or Disposal (TSD), etc.);	In September 1976, dust control equipment was installed at the Pier 4 and Pier 5 outloader bulk handling area. In February 1993, Century West installed a groundwater treatment system at Terminal 4 to remove impacted groundwater and abate the petroleum seep at the head of Slip 3. The system included a recovery well, a 4-inch total fluids airlift pump, 350-gallon oil/water separator, a 275-gallon oil batch tank and a two-horsepower air compressor. The system was in place until 2002, by which time, little or no sheen was observed in Slip 3. Based on the system's effectiveness on remediating the petroleum seep, the interim action system was disabled. A final remedy was implemented in 2004 consisting of installation of a permeable reactive wall for insitu groundwater treatment and removal of separate phase hydrocarbons from monitoring wells inland of the wall.	
h. groundwater wells, including drilling logs;	Through a 1953 agreement, the City CPD allowed (b) (6) to install a groundwater production well with a turbine pump at the grain leasehold. A State of Oregon Water Well report dated April 27, 1992, indicates the well was closed by filling with cement on or about April 23, 1992.	See deeds and easements at Tab 2. See other

	In 1993, 17 groundwater monitoring wells were installed to evaluate the nature and extent of the groundwater contamination at the site. The wells were installed in the potential oil seep source areas along the former UPRR pipeline and former Quaker State area between Slip 3 and the eastern site boundary. In 1998, 14 additional groundwater monitoring wells (HC-1 through HC-14), were installed at Slip 3 for the Remedial Investigation during October 1998 at 14 locations. All monitoring wells serve as data points for assessing the horizontal groundwater gradient and the horizontal migration of contaminants beneath the property In 2004, 16 groundwater monitoring wells were installed to determine the groundwater flow direction and assess groundwater quality discharging to the slips and the Willamette River from adjacent site-specific areas of concern (AOCs). Drilling logs for the installation activities are included in the respective reports at Tab 6.	environmental records at Tab 7. See supplemental records at Tab 9.
i. storm water drainage system, and sanitary sewer system, past and present, including septic tank(s) and where, when and how such systems are emptied and maintained;	**<u>Stormwater</u>** Stormwater discharges at Terminal 4 are permitted under the following: • Port's National Pollutant Discharge Elimination System (NPDES) Oregon DEQ Municipal Separate Storm Sewer System (MS4) Discharge Permit No. 101314. • KMBT holds an individual NPDES permit administered by DEQ. Under its permits, the Port conducts monthly inspections of stormwater filtration devices/features and regularly maintains and cleans catch basins and drain inlets annually. Most of the areas at Terminal 4 Slip 1 and Slip 3 are paved and graded to direct surface water to catch basins. A small low-lying area in the Cereal Foods Processing leasehold uses a sump and pump to remove stormwater in the area and redirect to a nearby stormwater drain. There are ten drainage basins at the Slip 1 and Slip 3 area properties. Of the drainage basins, four drain to Slip 1, two drain to Slip 3, one drains into Wheeler Bay, and the remaining three drain into the main channel of the Willamette River. See Figure 3 of the Storm Water Evaluation Work Plan	See drawings and maps at Tab 3. See other environmental records at Tab 7. See supplemental records at Tab 9.

	(Ash Creek, 2007) for the current location of all catch basins and outfalls at Terminal 4 Slip 1 and Slip 3. Historically, drainage basin D (see Figure 3) discharged partially to Slip 3 and partially to the river; the flow from this drainage basin was re-routed sometime prior to 2007 to discharge to the river, and the previous outfalls to Slip 3 from this drainage basin were blocked. Portions of the conveyance lines in drainage basins M and L were modified in 2006 during the Pier 2 rail yard construction, which included installation of Contech StormFilters near the IRM leasehold (north of the KMBT leasehold); however, outfall locations remained the same. POP0176152. The outfall from drainage basin R was damaged during a 2010 construction project at berth 401; the outfall was reconstructed to discharge directly south of the former outfall location. KMBT has a wastewater treatment system that diverts soda ash-containing surface water for treatment. Soda ash handling associated with KMBT's operations result in small amounts of soda ash mixing with stormwater and altering the pH such that it cannot be discharged to the river under KMBT's individual NPDES permit. KMBT has modified the catch basins around its leasehold to include valves and sumps to divert stormwater and washdown water (from washing machinery and equipment) to a 43,000 gallon concrete retention basin in the southeast corner of its leasehold. Water collected in the pond is then pumped to an oil/water separator at the KMBT maintenance building and then neutralized with sulfuric acid prior to being discharged to the sanitary sewer system under a pretreatment permit issued and administered by the City of Portland Bureau of Environmental Services. See also the response to Question 52 below. **Sanitary Sewer** Currently, sanitary sewer lines from Terminal 4 connect to a City of Portland main trunk line located off of the Terminal 4 property. Batch discharges to the sanitary are periodically performed at Terminal 4 under permits with the City of Portland. This includes the discharges of for decant water from stormwater cleanout and terminal sweeping activities. See also the response to Question 41. **Septic Tanks and Cesspools** During its lease of Terminal 4 from the City CPD, the Surgeon's Office for the Army's Sub-	

	Port of Embarkation reported that sewage generated at the terminal was not treated. The raw sewage dumped into the "St. John Sewer" and then into the Willamette River. No additional information was available. Prior to the Port's ownership of the Terminal 4 property, the following septic systems were in place: • Four cesspools were historically located on the former Cargill leasehold west of grain storage silos. The former cesspools were evaluated as AOC 15 during the RI for Slip 1. • Two cesspools were historically located on the former Cargill leasehold south of Cargill truck dump and west of the former millwright shop, as noted on undated Cargill blueprints. These former cesspools were also evaluated as AOC 15 during the RI for Slip 1. • A septic tank and two cesspools located north of Berth 411 and the Pier 4 Main Dock Service Building (currently the KMBT leasehold) were identified on a CPD drawing from 1959. The drawings do not indicate the construction date of the septic tank or if the tank was removed, and the period of use is unknown. • A City CPD construction log indicated that a toilet facility with a septic tank system was constructed at Pier 1 House in 1965. • A septic tank and two cesspools located north of Berth 411 and the Pier 4 Main Dock Service Building (currently the KMBT leasehold) were identified on a City CPD drawing from 1959. The drawings do not indicate the construction date of the septic tank or if the tank was removed, and the period of use is unknown. • A septic tank and drain field are shown on a 1953 map of the Quaker State oil packaging plant at Terminal 4 Slip 3; the septic tank and drain field were located northwest of the office building. The drawings do not indicate the construction date of the septic tank or if the tank was removed, and the period of use is unknown.	
j. subsurface disposal field(s), Underground Injection Control (UIC) wells, and other underground structures (e.g., underground storage tanks (USTs); and where they are located, if they are still used, and	Two dry wells were constructed east of Berth 401 in 1999 for stormwater discharge. A dry well east of Slip 1 was identified on a 1971 property map and was confirmed in the field on August 25, 2011.	See drawings and maps at Tab 3. See property

how they were closed; including, but not limited to, the tanks associated with the St. Johns Auto Wrecking Yard;	The following underground storage tanks USTs were identified in connection with the Terminal 4 property. The USTs listed below with the exception of the last tank (No. 20) were addressed in the Terminal 4 Remedial Investigations for Slip 1 and Slip 3 that were previously submitted to the EPA. 1. T4-14 – Gearlocker Building, near southeast corner • 1,750-gallon UST for waste oil • T4-14 was decommissioned by HAI in 1991. Petroleum-impacted soil was removed from the tank excavation area. Neither free product nor groundwater was encountered during the UST decommissioning activities. Sampling of soils adjacent to the building around the fill pipe revealed detections of diesel- and oil-range petroleum hydrocarbons as well as trichloroethane (at 0.3 ppm) and tetrachloroethane (at 4.7 ppm). TCLP lead, toluene, and total xylenes were also detected in the sample but at concentrations below relevant action levels (PCBs were non-detect). HAI was unable to completely remove impacted soil in this area because of the close proximity to the gearlocker building's foundation. In August 1995, Century West collected additional samples in the vicinity of T4-14 and submitted them for TPH and halogenated solvents analysis. All of the samples were non-detect for halogenated solvents and the highest concentration of TPH exhibited was 1,700 ppm. Based on the results, it was determined that approximately 14 cubic yards of impacted soil remains in this area of the gearlocker. DEQ subsequently conferred NFA status for the former UST in 1996. 2. T4-15 – Rogers Terminal Leasehold, Bldg. 305 • 10,000-gallon UST used for unleaded gasoline • Decommissioned by HAI 1990. The tank and its appurtenance were found to be intact and all samples confirmed that a release had not occurred. 3. T4-16 – Former Maintenance Facility, Bldg. 314 • 3,000-gallon UST used for diesel storage • Decommissioned by Geraghty & Miller in 1995. Fitt Environmental removed all	transaction records at Tab 5. See supplemental records at Tab 9.

	associated piping and fittings. Samples collected from the tank excavation area were at concentrations below DEQ cleanup standards for the site. DEQ gave verbal approval to backfill the UST excavation. 4. T4-17 – West of Boiler, Bldg. 320 • 15,000-gallon UST used for boiler fuel • Decommissioned by HAI in 2000 and received a NFA from DEQ. 5. T4-18 – PM-Ag, Bldg. 322 • 8,000-gallon UST used for diesel • The UST was decommissioned by removal in 1990. 6. T4-19 – Terminal Flour Mills Leasehold • 10,000-gallon UST used to store Fuel Oil #5 • Decommissioned by removal by Terminal Flour Mills. The removal date is not known and final documentation of the removal has not been identified. According to the RI report for Terminal 4 Slip 1, total petroleum hydrocarbons (TPH) was not detected above the method reporting limit (MRL) in the soil or grab groundwater samples. Volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbons (PAHs) were not detected above the MRL in the grab groundwater samples with the exception of naphthalene and 2-Methylnaphthalene which were low and below the preliminary screening levels. 7. T4-20 – Terminal Flour Mills Leasehold • 1,000-gallon UST used to store diesel • Decommissioned by removal by Terminal Flour Mills. According to the RI report for Terminal 4 Slip 1, TPH was not detected above the MRL in the soil or grab groundwater samples. VOCs and PAHs were not detected above the MRL in the grab groundwater samples with the exception of naphthalene and 2-methylnaphthalene which were low and below the preliminary screening levels. Chrysene was detected in grab groundwater at a low concentration that slightly exceeded the fish consumption SLV in SB-37 but not in downgradient monitoring well MW-08.	

	8. T4-21 – Terminal Flour Mills Leasehold • 1,000-gallon UST used to store Fuel Oil #2 • Decommissioned by removal by Terminal Flour Mills. According to the RI report for Terminal 4 Slip 1, TPH was not detected in soil or grab groundwater above the MRL. No PAHs were detected above the preliminary screening levels. VOCs were not detected above the MRLs. 9. T4-22 – Cargill Leasehold • 500-gallon UST used for "heater" fuel oil • Decommissioned by removal, however, the removal date is not known. The former tank was located inside the grain storage building which has a multi-level basement with limited access. During an October 2003 reconnaissance of the basement, no evidence of a UST was observed. Because the location of this UST was unknown and the area of its reported location is generally inaccessible to subsurface investigation, this AOC was assessed by completing explorations downgradient of the building. TPH and VOCs were not detected above the MRLs in grab groundwater. No PAHs were detected above preliminary screening levels in the grab groundwater samples. 10. T4-23 – Cargill Leasehold • 1,000 gallon UST used for diesel fuel • Decommissioned by removal in 1989. TPH was not detected above the MRL in the soil or grab groundwater samples. VOCs were not detected above the MRL in the grab groundwater samples. Six PAHs were detected in grab groundwater from boring SB-11 at concentrations that slightly exceeded the preliminary screening levels; however, their presence was likely associated with sediments entrained in the sample. No PAHs were detected in grab groundwater above the MRLs in downgradient boring SB-02. 11. T4-24 – Hall-Buck, Rail Dump Building • 10,000-gallon (storage contents unknown) • Likely decommissioned by removal; however the removal date is not known, and	

	documentation of its removal has not yet been identified. Hall-Buck indicated that the UST was replaced by their current UST T4-43. • Although the details on the UST removal not available, T4-24 was evaluated during the RI for Slip 1. Two soil borings (SB-51 and SB-52) were installed adjacent to the former the UST. TPH was not detected above MRLs in the 11 and 12 foot samples from SB-51 and SB-52, respectively. VOCs were not detected in soil above the MRL with the exception of acetone which was low and below the screening criteria. TPH, PCBs, and VOCs were not detected in grab groundwater above the MRLs with the exception of toluene detected in SB-51 at a low concentration below the preliminary screening levels. Up to seven PAHs were detected in grab groundwater at low concentrations that slightly exceeded the preliminary screening levels. The concentration of several metals in grab groundwater (total and dissolved) exceeded the aquatic SLVs. None of these compounds exceeded the preliminary screening levels for groundwater from well MW-16. 12. T4-26 – Building 334, West side • Gasoline UST (capacity not known) • No documentation of decommissioning was identified. An asphalt patch next to the building indicates it was likely removed. Sampling in the vicinity of the UST indicated TPH was not detected above the MRL in soil. TPH and VOCs were not detected in grab groundwater above the MRLs. Metals were not detected above the preliminary screening levels in the grab groundwater samples from the borings and in groundwater from well MW-11. Three PAHs were detected in grab groundwater above the preliminary screening levels in each boring but not in the groundwater sample from well MW-11. A trace concentration of 4,4'-DDT exceeded the screening criteria in groundwater from MW-11 in September 2004. The concentrations of 4,4'-DDT were below the screening criteria in the other sampling events. 13. T4-27 - Multnomah County Sheriff River Patrol Dock • 1,000-gallon gasoline and 3,000-gallon diesel USTs • The 1,000 gallon UST was decommissioned in 1995 by Geraghty & Miller, Inc.	

	Detected concentrations were below the numerical cleanup standards therefore DEQ gave verbal approval to backfill the UST excavation. 14. T4-28 & T4-29 – Gearlocker Compound • 4,000-gallon gasoline & 4,000-gallon diesel USTs • The former Quaker State USTs were decommissioned by GeoEngineers in 1996. Oil range petroleum hydrocarbons were detected at a concentration greater than the DEQ cleanup level in one soil sample obtained beneath the south fuel pump. Approximately 5.5 tons of petroleum-impacted soil was removed from the vicinity of the south fuel pump and transported to TPS Technologies in Portland, Oregon for treatment. C. Wark Trucking removed the two USTs and they were transported to Schnitzer Steel in Portland, Oregon for recycling. Rinseate water was taken to Oil-Rerefining Company in Portland, Oregon for recycling. • A confirmation soil sample obtained from the base of the remedial excavation did not contain petroleum concentrations greater than the DEQ cleanup level. DEQ issued an NFA for the former USTs on February 6, 1997. 15. T4-32 – Gearlocker Building • UST was reportedly discovered when a forklift parked above the tank and it collapsed. No additional information was available. 16. T4-43 – KMBT, North of Rail Dump Building • 5,000 gallon diesel UST currently in use by KMBT 17. T4 – Cold Storage Plant UST • 2,500-gallon UST used for oil storage • The UST appears to have been removed based on drawings from 1977; however, there is no record of removal. This tank was investigated during the RI for Slip 1. TPH was not detected above MRLs and VOCs were not detected above the MRLs with the exception of acetone which was below the preliminary screening levels. 18. Tank at Pier Four Main Dock Service Building	

	• 675-gallon UST used to store heating oil • The USTs presence/continued use is currently under evaluation Additional details on the removal of these USTs are included in response to Question 64. Potential subsurface disposal fields investigated at Terminal 4 include: • Alleged drum burial area on western portion of the property – a former Port employee alleged that the area west of the Cargill office contained buried drums. An investigation that included a geophysical survey was performed in 1993 and no anomalies were discovered. This area was investigated during the RI for the Slip 1 area and sampling results confirmed this area does not require further investigation or action. • Two creosote-treated railroad tie waste areas on the former Cargill leasehold - Longshoreman identified two unpaved areas as dump sites for creosote-coated rail ties and other waste. This area was investigated during the RI for the Slip 1 area. No rail ties were found during the investigation and sampling results confirmed this area does not require further investigation or action. Former septic systems at the Terminal 4 property are discussed in the response to Question 13 (i) above.	
k. any and all major additions, demolitions or changes on, under or about the Property, its physical structures or to the Property itself (e.g., stormwater drainage, excavation work); and any planned additions, demolitions or other changes to the Property;	The initial development of Terminal 4 occurred from 1907 to 1908 when the Oregon-Washington Railroad and Navigation Company (OWR&N Co., a UPRR affiliate) constructed a railroad along the eastern edge of the floodplain. By 1912, UPRR had constructed an oil-supply dock for locomotives and, on the east slope above the rail track, the St. Johns Tank Farm which was used as a locomotive fueling station. Gatton Slough traversed the central portion of the property. Following its acquisition in 1917, the City CPD began preparation for the development of the property. Trees and vegetation were removed, and fill material was deposited across the low-lying ground and leveled with horse teams. Most of the lower Gatton Slough was filled at the	See agreements and contracts at Tab 1. See other environmental records at Tab 7. See supplemental records at Tab 9.

	time. Beginning about the same time, fill was placed into the offshore shallows to extend the riverbank out into the channel. With the physical preparation of the land complete, construction for development of the property as a marine terminal ensued. The following summarizes the major property changes that occurred during the City CPD's ownership. 1917-20 Slip 1 and 3 dredged and Pier 1 (Berths 403-405), grain elevator, operating house, storage bins, track shed, and Warehouses 1-5 constructed. Spur tracks from existing UPRR line constructed. 1919 Liquid bulk storage area constructed at the head of Slip 1; House 4 constructed. 1919-20 Pier 2 and Berths 406-408 constructed. Vegetable oil weighing house constructed east of Slip 1. 1920 Flour mill adjoining concrete warehouse for grain and flour, and Berth 409 constructed. Houses 1 and 2 constructed on the upstream side of Slip 1. Boiler house and service buildings constructed east of Slip 1. Quay and bulk handling structures constructed at Pier 5 along with Berth 412. 1920-24 Filling platform for liquid bulk storage area constructed east of Slip 1. 1921 Storage bunkers constructed east of Slip 3. 1921-22 Warehouses 6 and 7 constructed on Pier 2, Slip 1 serviced by Berths 406 and 407. 1922 House 5 constructed perpendicular to House 4 along the river. Houses 6, 7, and 8 were constructed perpendicular to House 5 as a cold storage plant and ventilated warehouse. 1923 150,000-gallon elevated water tank constructed. H.R. Leckenby fumigation plant constructed. 1930 Grain storage annex constructed north of the grain elevator. 1931 Storage tanks added to liquid bulk storage area. 1932 Gearlocker building constructed north of the liquid bulk storage area. 1940-41 Berth 401 and Airveyor system for unloading bulk grain from barges constructed on the harbor side of Houses 4 and 5 at Pier 1 for grain unloading. 1941 UPRR along with OWR&N were granted the right and authority to repair the face of Pier 5 and install a lateral pipeline from the water terminus of the existing pipeline. 1942 UPRR along with OWR&N signed a (sub)lease with the U.S. on November 4 allowing the U.S. to construct and use two footpath crossings over the railroads'	

		tracks and right-of-way. Construction of the footpaths also included installation of 12- inch culverts. The footpaths were for use by pedestrians only to access the U.S.-leased facilities at Terminal 4. The lease was canceled on September 30, 1946.	
	1942-46	The U.S. takes over operation of Terminal 4 for the Army Transport Service's Portland Sub-Port of Embarkation. U.S. added a second story to the original gearlocker building, rehabilitated the slip side of Pier 5, constructed and/or repaired 22 miles of rail trackage, installed an auxiliary pipeline to Slip 3 at Pier 5, and utilized a gas station located along the southern side of Carroll Road which was located northeast of the original gearlocker building.	
	1946-47	Bulk loading structures constructed at Berths 412 on the slip slide of Pier 5.	
	1948	Head of Slip 2 partially filled following dredging for construction on UPRR oil dock located along the Willamette River south of Pier 5. Slip 3 dredged.	
	1951	Railcar dumper, hydraulic truck unloading hoist and dust collection system added to grain structures at Pier 1.	
	1953	Quaker State oil packaging plant constructed with a main building, eight aboveground storage tanks (ASTs), and an underground transfer pipeline from the tank farm to the head of Slip 3. Slip 3 widened and the head of Slip 2 filled.	
	1954	Eight steel grain storage tanks constructed east of the grain storage buildings at Slip 1. Electric elevator system at grain elevator modernized.	
	1955	Pier 2 rehabilitated and two gantry cranes added. Berths 410 and 411 constructed on the downstream side of Slip 3. Fumigation plant removed.	
	1957	Berth 401 renovated.	
	1957-58	Slip 3 widened for the construction of Pier 4 and filling of head of Slip 2 completed.	
	1958	Second gallery for grain loading added at Pier 1.	
	1961	Head of Slip 1 developed as small boat landing.	
	1962	Pier 5 harbor-side wharf and Berth 409 at the head of Slip 1 removed. Dravo bulk unloader installed at Pier 4.	
	1964	Steam cleaning operation constructed near the boiler house and car cleaning pit.	
	1966	Five tanks constructed by Pacific Molasses added to liquid bulk storage area.	
	1968	Warehouse 4 constructed at Pier 2. Matson Navigation Co. installed 33-ton capacity container crane at Pier 2. Three 36-ton revolver cranes purchased and installed at Pier 4.	

	1968-69 Berths 404 and 405 reconstructed (Berth 405 to handle offloading of barges for grain). Coal equipment and structures removed at Pier 5. During the Port's ownership of the Terminal 4 property, the following modifications were completed: 1971 Grain elevator remodeled; Following discovery of leaks, UPRR abandoned the pipeline to the St. Johns Tank Farm and installed a replacement pipeline that ran parallel to the former one. 1973 House 8 demolished at Pier 1. Berth 417 constructed southwest and upstream of Slip 3. 1974 Elvalsons removed its Balloon Building from the area of Slip 3 1975 Berth 401 reconstructed to handle ships, adding grain loading equipment and conveyor system. 1977 OWR&N and UPRR entered into an agreement to construct, maintain and use a private roadway at Terminal 4 and had the right to construct, maintain, and use the area between the rails of tracks and the right of way. 1978 Cold storage plant and ventilated warehouse (Houses 6 and 7) at Pier 1 removed. 1980 Multnomah County moved a boat house in Wheeler Bay for its river patrol boat 1983 UPRR's operation of the St. Johns Tank Farm tanks and replacement pipeline ceased. 1984 Boat landing at the head of Slip 1 removed and ro-ro dock, called Berth 409, constructed in its place. Service buildings removed, including an administration building, cafeteria/restaurant, and welfare building. Whirley cranes removed from Berth 410 and 411. 1985 Quaker State ASTs and underground pipeline removed. Quaker State bottling building converted to a gearlocker. 1986 City of Portland began construction of Outfall 52C and the associated storm sewer system serving Lombard Street properties. 1987 Bulk outloading structures constructed at Pier 4 by Hall-Buck Marine. Construction of City drainage system and Outfall 52C completed at the head of Slip 1. Tanks removed from UPRR's St. Johns Tank Farm.	

	1988	Diesel and gasoline (USTs) and fueling station installed by Oregon Terminal Company. Hall-Buck received approval to improve the Dravo Bulk loader with air pollution controls with washwater pretreatment system. The northern UPRR pipeline was excavated and removed in May and June to facilitate the investigation of historical pipeline leaks and to assess the impact to soils adjacent to and beneath the former pipeline.	
	1989	Second railcar dumper added to grain leasehold. Two pipes added at Pier 1 for liquid bulk storage area.	
	1990	AST (T4-82) operated by Rogers Terminal was abandoned. Pier 5 outloader decommissioned.	
	1990	House 4 condemned.	
	1991	Guard station constructed.	
	1992	Four of the steel ASTs for grain storage (east of the storage bins to the north of Slip 1) modified.	
	1992-93	Downstream row of tanks at original liquid bulk storage area removed. Section of abandoned UPRR pipeline removed.	
	1994-95	All but six of the tanks remaining at liquid bulk storage area removed.	
	1995	Soda ash storage building constructed at Pier 4.	
	1996	House 6, House 7, Berth 406, and Berth 407 at Pier 2 dismantled.	
	1996	Oregon Terminal Company's diesel and gasoline USTs removed.	
	1997	Pipeline for liquid bulk storage area rebuilt under Berth 408. Wharf at Berth 412 removed.	
	1997-98	Portions of UPRR's decommissioned/abandoned St. Johns Tank Farm pipeline removed from under Berth 412 and elsewhere.	
	1999	Houses 3, 4, and 5 and Berths 403 and 404 demolished. Mechanical/electrical building and bridge to Berth 401 constructed.	
	2004	Installation of the Bank Excavation and Backfill Remediation Area (BEBRA) at the head of Slip 3 to control light non-aqueous phase liquid (LNAPL) from migrating into the slip (former seep area).	
	2006	Pier 2 rail yard constructed. Many of the former tracks were removed and the drainage system was modified.	
	2007	Hitachi crane removed.	

	2008 Eight grain tanks at the Cargill leasehold were demolished. 2008 Construction of a near-shore cap at the head of Slip 3 to isolate petroleum contaminated sediment. 2008 Stabilization and capping of the Wheeler Bay slope to isolate contaminant migration to the river. 2009 Installed pipe rack at Berth 401. 2010 Installed catwalks and ladders at Berth 401. Installed steel fender piles at Berth 401, 410, and Berth 411. Bank repairs at Wheeler Bay. 2011 Capstan wench installed at Berth 410.	
l. all maps and drawings of the Property in your possession; and	Maps and drawings identified relevant to the Terminal 4 property are included at Tab 3 and in property transaction records located at Tab 5. Tab 9 also contains maps and drawings.	See drawings and maps at Tab 3. See property transaction records at Tab 5. See supplemental records at Tab 9.
m. all aerial photographs of the Property in your possession.	Aerial photographs relevant to the Terminal 4 property are included in Tab 4.	See aerials photographs at Tab 4.
14. For Properties adjacent to the Willamette River, provide specific information describing the river-ward boundary of private ownership and where state aquatic lands and/or state-management jurisdiction begins. Provide a map that delineates the river-ward boundary of each Property.	See the DSL Settlement and Mutual Release at Tab 1 of the Port's 104(e) response for Terminal 1 South, submitted to EPA and dated August 16, 2008.	

15. For each Property, provide all reports, information or data you have related to soil, water (ground and surface), or air quality and geology/hydrogeology at and about each Property. Provide copies of all documents containing such data and information, including both past and current aerial photographs as well as documents containing analysis or interpretation of such data.	See records at Tabs 5, 6, 7, and 9.	See property transaction records at Tab 5. See site investigation records at Tab 6. See other environmental records at Tab 7. See supplemental records at Tab 9.
16. Identify all past and present solid waste management units or areas where materials are or were in the past managed, treated, or disposed (e.g., waste piles, landfills, surface impoundments, waste lagoons, waste ponds or pits, tanks, container storage areas, etc.) on each Property. For each such unit or area, provide the following information: a. a map showing the unit/area's boundaries and the location of all known units/areas whether currently in operation or not. This map should be drawn to scale, if possible, and clearly indicate the location and size of all past and present units/areas; b. dated aerial photograph of the site showing each unit/area; c. the type of unit/area (e.g., storage area. landfill, waste pile. etc.), and the dimensions of the unit/area; d the dates that the unit/area was in use; e. the purpose and past usage (e.g., storage, spill containment, etc.); f. the quantity and types of materials (hazardous substances and any other chemicals) located in each unit/area and;	There are no "solid waste management units" at the property as that term is defined and regulated under the Resource Conservation and Recovery Act (RCRA). To the extent that EPA's question was not intended to be limited to solid waste management units regulated under RCRA, the following response is a summary of areas where waste materials, either otherwise managed under RCRA or non-regulated, are or were in the past managed. Also, see response to Question 13 (j). Material management areas currently in use by the Port at Terminal 4 Slip 1 and Slip 3 are limited to the following. Note that tenants are responsible for their individual leaseholds and may have information responsive to this question that is not readily available in the Port's records. 1. Gearlocker Building a. See maps and drawings at Tab 3 b. See aerial photos in Tab 4 c. Dumpster/roll-off area (exterior); general storage (interior) d. 1985 to present e. Storage	See maps and drawings at Tab 3. See aerial photographs in Tab 4. See site investigation records at Tab 6. See supplemental records at Tab 9.

g. the construction (materials, composition), volume, size, dates of cleaning, and condition of each unit/area.	f. Exterior storage is limited to recycling and municipal waste dumpsters (one roll-off for trash and dumpsters for recycling). Interior building storage includes ice melt (Peak SF BB), asphalt repair products (Cracksealer, Seal Coat, QPR), and a small amount of pesticide (Ranger Pro). g. Dumpsters and roll-offs are emptied as needed. Materials stored inside the gearlocker building are new products and are used as needed. 2. Flammable Building and Tamper Room a. See maps and drawings at Tab 3 b. See aerial photos in Tab 4 c. Staging area d. Unknown e. Temporary staging as needed f. Materials vary, but are typically limited to used oil from MFM activities. g. This is a temporary staging area and materials are transported off-site promptly and not permitted to accumulate. Areas where materials were managed in the past have been addressed as part of the upland remedial investigations for Slip 1 and Slip 3. These areas are summarized in the relevant reports that are included in Tab 6.	
17. If the unit/area described above is no longer in use, how was such unit/area closed and what actions were taken to prevent or address potential or actual releases of waste constituents from the unit/area.	See site investigation records at Tab 6.	
18. For each Property, provide the following information regarding any current or former sewer or storm sewer lines or combined sanitary/storm sewer lines, drains, ditches, or tributaries discharging into the Willamette River:	Historical sanitary and storm sewer information is contained in the maps and drawings included at Tab 3. A general description of the stormwater system that is present at the Terminal 4 property is provided in response to Question 13 (i) above.	See maps and drawings at Tab 3. See property transaction records at Tab 5.

		See site investigation records at Tab 6, specifically: Ash Creek Associates, Inc./NewFields. 2007. Storm Water Evaluation Work Plan Terminal 4 Slip 1 and Slip 3. June 2007
a. the location and nature of each sewer line, drain, ditch, or tributary;	A general description of the stormwater system at Terminal 4 Slip 1 and Slip 3 is provided in response to Question 13 (i) above. See Figure 4 of the Storm Water Source Control Completion Report (Ash Creek, 2011) for the current location of the stormwater features. The property is currently connected to the City of Portland's sanitary sewer. Historical sanitary and storm sewer information, to the extent it is available, is contained in the maps and drawings included at Tab 3.	See maps and drawings at Tab 3.
b. the date of construction of each sewer line, drain, ditch, or tributary;	The property was connected to the City of Portland's municipal sanitary sewer in 1972. Prior to 1972, the property was served by septic systems. No additional information was available.	See site property transaction records at Tab 5.
c. whether each sewer line, or drain was ever connected to a main trunk line	Sanitary sewer lines from Terminal 4 Slip 1 and Slip 3 connect to the City of Portland main trunk line located off of the Terminal 4 property. Figure 4 of the Storm Water Source Control Completion Report (Ash Creek, 2011).	
d whether each sewer line, drain, ditch, or tributary drained any hazardous substance, waste, material or other process residue to the Willamette River; and	During its lease of Terminal 4 from the City CPD, the Surgeon's Office for the Army's Sub-Port of Embarkation reported that sewage generated at the terminal was not treated. The raw sewage dumped into the "St. John Sewer" and then into the Willamette River. No additional information was available.	

	See also the response to Question 52. No other documented evidence was identified.	
e. any documentation regarding but not limited to the following on any and all outfalls to the Willamette River which are located within the boundaries of the Property(ies). Your response should include, but not be limited to: i. the areas serviced by the outfalls; and ii. the type of outfall (i.e., storm water or single facility operational).	See response in sub-bullets (i) through (ii) below. See Figure 4 of the Storm Water Source Control Completion Report (Ash Creek, 2011) for a description of the basin areas and the current location of all outfalls at Terminal 4 Slip 1 and Slip 3. See also response to Question 13(i) above. All of the outfalls that serve the Terminal 4 property are dedicated to stormwater.	
19. Provide copies of any stormwater or property drainage studies, including data from sampling, conducted at these Properties on stormwater, sheet flow, or surface water runoff. Also provide copies of any Stormwater Pollution Prevention or Maintenance Plans or Spill Plans developed for different operations during the Respondent's operation of each Property.	Stormwater at Slip 1 and Slip 3 is being evaluated as part of the DEQ-lead upland source control program. See documents related to this evaluation as referenced in the column at right. Stormwater at the Terminal 4 property is managed under the Port's Municipal Separate Storm Sewer System (MS4) Discharge Permit No. 101314 as well as under individual tenants general stormwater permits (i.e., KMBT has an individual stormwater permit). The MS4 permit requires a stormwater management plan and KMBT's permit requires a stormwater pollution control plan (SWPCP). The Port's records also contain a 1999 SWPCP for the IRM leasehold. This document is included in Tab 7. It is the Port's understanding that KMBT has a Spill Pollution Control and Countermeasures (SPCC) plan for its leasehold, however, the document was not included in the Port's records. Also see documents referenced in the column at right.	See MS4 permit information in Tab 13 of the Port's 104(e) response for Terminal 5, submitted to USEPA and dated May 16, 2008. See other environmental records at Tab 7. See supplemental records at Tab 9.

Section 4.0 - Respondent's Operational Activities		
20. Describe the nature of your operations or business activities at each Property. If the operation or business activity changed over time, please identify each separate operation or activity, the dates when each operation or activity was started and if applicable, ceased.	The Port is the current land owner of Terminal 4 and has owned the property since January 1, 1971. Since that time, the Port has acted primarily as landlord for the tenants that lease the warehouses, yard space and berths at the property. As the owner, the Port engages in grounds maintenance (fencing and landscaping) and is responsible for maintaining property infrastructure (e.g., water and sanitary lines), berths (e.g., piling replacement), the non-leased areas, a majority of the rail yard and switches, and some terminal equipment. The Port also performs certain activities for tenants, which includes maintaining, in good working order, interior systems of leased structures (plumbing and sprinklers) and exterior structural components (windows, siding, roofs) as well as general maintenance of pavement and rail leads. From time to time, the Port also provided certain limited services to tenants related to such things as dock cleaning and the handling, receipt, movement and delivery of some cargo. From 1985 to 1988, the Port's activities at Terminal 4 also included use of the gearlocker building as the base for the Port's MFM department. The Port currently uses the gearlocker building for storage. See also the response to Questions 4 and 30.	See drawings and maps at Tab 3. See property transaction records at Tab 5. See other environmental records at Tab 7. See supplemental records at Tab 9.
21. At each Property, did you ever use, purchase, generate, store, treat, dispose, or otherwise handle any waste, or material? If the answer to the preceding question is anything but an unqualified "no," identify: a. in general terms, the nature and quantity of the waste or material so transported, used, purchased, generated, stored, treated, disposed, or otherwise handled; b. the chemical composition, characteristics, physical state (e.g., solid, liquid) of each waste or material so transported, used, purchased, generated, stored. treated, disposed, or otherwise handled; c. how each such waste or material was used,	The following attached tables contain information of waste materials, materials and chemicals used at Terminal 4: Table 1: Materials Used at Terminal 4 by the Port (1971 to Present) Table 2: Material Safety Data Sheet Chemicals at Terminal 4 (1971 to Present) Table 3: Waste Materials Generated at Terminal 4 by the Port and Tenants (1971 to Present) Material handling and disposal at the Terminal 4 property are also described in response to Questions 26, 39, 40, 64 and 71 and those responses are incorporated here by reference. Contractors associated with those occurrences are identified in Question 6 (b) above. Information on PCB waste materials is contained in response to Question 47.	See agreements and contracts at Tab 1. See other environmental records at Tab 7. See supplemental records at Tab 9.

purchased, generated, stored, treated, transported, disposed or otherwise handled by you; and d. the quantity of each such waste or material used, purchased, generated, stored, treated, transported, disposed or otherwise handled by you.	In addition, excess soil from construction projects is stored in five soil stockpiles at Slip 1. In general, the stockpiles are managed for temporary erosion control with perimeter hay bales and the stockpiles were seeded for permanent erosion control. The soil stockpiles are described as follows. **East Stockpile** a. Approximately 30,000 cubic yards of soil were in the east stockpile. The soil was excavated from the river bank south of Terminal 4 Slip 3 to flatten the slope for stability and greenscape purposes. b. The east stockpile consists of sand and silt excavated during construction of new automobile handling areas on the southern portion of Terminal 4. Prior to construction, soil sampling from the area to be excavated was conducted. The samples were analyzed for TPH, PAHs, pesticides, PCBs, and metals. Except for PAHs, results were typically below detection limits or background concentrations. In November 2006, the east stockpile was randomly sampled and based on the historical data analyzed for TPH and PAHs. TPH was not detected. PAHs were detected at concentrations below criteria used by DEQ to determine if soil is suitable for use as clean fill. c. In 2006, a portion of the east stockpile was used as fill for the Pier 2 railyard improvements between Wheeler Bay and Slip 1. In 2008, approximately 4,000 cubic yards of the east stockpile was used as fill following demolition of the former grain tanks at the north end of the Slip 1 area. **West Stockpile** a. Approximately 9,000 cubic yards of soil are in the west stockpile. During the excavation of buildings and utilities during wet weather, material found to be too wet for proper compaction was placed on the west side of the east stockpile, forming the west stockpile. b. The west stockpile consists of sand, silt, and asphalt concrete grindings excavated during construction of new automobile handling areas on the southern portion of Terminal 4. Prior to construction, the existing asphalt concrete was removed with an asphalt grinder. The asphalt grindings were recycled as base course on the construction	

	site. Utility and footing excavations were completed through the base course material. Prior to construction, soil sampling from the area to be excavated was conducted. The samples were analyzed for TPH, PAHs, pesticides, PCBs, VOCs, and metals. Except for TPH and PAHs, results were below detection limits or background concentrations. In November 2006, the west stockpile was randomly sampled and based on the historical data analyzed for TPH and PAHs. TPH and PAHs were detected with concentrations of benzo(a)pyrene above criteria used by DEQ to determine if soil is suitable for use as clean fill. The analytical results were consistent with the presence of asphalt grindings in the stockpile. c. The stockpile is being managed as part of the Slip 1 RI. **Ballast Rock Stockpiles** a. There are three stockpiles of ballast rock located east of Slip 1 containing a total of approximately 6,000 cubic yards. The material in the stockpiles is ballast material that was removed in preparation for the new rail tracks at Terminal 4 in 2006. b. The stockpiles consist of 3-inch rock (originally used to construct railroad beds) mixed with sand and silt. Composite soil samples from each ballast rock pile were collected in November 2006. The samples were analyzed for TPH, PAHs, and metals. TPH and PAHs were detected and lead and zinc were detected above background concentrations. c. In 2006, the Port used a mechanical sieve to separate the ballast rock from the finer soil in a portion of the stockpiles. Approximately 1,718 tons of finer soil was disposed of at the Hillsboro Landfill in Hillsboro, Oregon. The separated rock remains on site pending reuse. Approximately 2,232 tons of additional material generated during embankment work was also disposed of at the Hillsboro Landfill at that time. See also the response to Questions 6(b), 26, 27, and 47 for discussion of wastes from remediation activities.	
22. Describe all activities at each Property that was conducted over, on, or adjacent to, the Willamette River. Include in your description whether the activity involved hazardous substances, waste, or materials and whether	Over-water activities at Terminal 4 are discussed by area below: **Pier 1 (Berths 401 and 405)** Historically there was cold storage and ventilated warehouse	See drawings and maps at Tab 3.

any such hazardous substances, waste, or materials were discharged, spilled, disposed of, dropped, or otherwise came to be located in the Willamette River.	storage here. Grain was transported to and from Berth 401 using rail cars that moved along trackage located between Berth 401 and the track shed. Materials were transported to and from Berth 405 utilizing a conveyor system that moved grain from ships at the berth onto the upland property. The grain leasehold was in use from 1920 to 2003 and was operated by the City CPD from 1920 to 1942, by the United States from 1942 to 1947, and then by Kerr-Gifford and its successor, Cargill, from 1947 until 2003. Grain, flour, tricalcium phosphate, and pulp were historically loaded or unloaded at the leasehold. Releases of grain and other materials, including oil, from the overwater activities at the grain leasehold occurred and are described further below. **Pier 2 (Berths 406, 407, 408 and 409)** Historically, Pier 2 has been used for handling ores and ore concentrates, scrap iron, coal, containers of food and agricultural products, and liquid bulk materials, as detailed in below in the response to this question. Currently, IRM handles urea ammonium nitrate (UAN, a fertilizer), at Berth 408. Historically, there was also an elevator on the riverward face of the warehouse on Pier 2, presumably used to move paper products or other forest products from a barge to the Matson Warehouse. Berth 409 was removed in 1962. In June 1996, during the Pier 2 dismantling project, the dock structure at Berths 406 and 407 collapsed. The dock structure and berths were subsequently removed. Releases of bauxite and oil from Pier 2 have been documented, as detailed further below. **Pier 4 (Berths 410 and 411)** Historically, Pier 4 was used for handling ores and ore concentrates, including alumina, bauxite, chromite, and lead concentrate. The City CPD installed the Dravo bulk unloader in 1962 to off-load bulk cargoes, which included the metal ores and other products in the 1960s and 1970s. Pencil pitch was handled at Berth 411 from 1974 to 1998. Longshoremen removed the pencil pitch from the ships' holds by means of clamshell-equipped Dravo unloading tower on Pier 4 and loaded it directly onto truck trailers or rail cars adjacent to the pier. From at least 1978 to 1987, the Port hired stevedoring companies to unload pencil pitch vessels (Jones and SSA) and provided certain dock maintenance and cleaning services. How and by whom the pencil pitch was unloaded from 1974 to 1978 is currently unknown but research is continuing. From 1987 to 1998 the Port leased a fixed area of Terminal 4 and the Dravo unloading crane to Hall-Buck Marine and Hall-Buck Marine controlled all pencil pitch unloading during that time period. Soda ash has been handled at Pier	See property transaction records at Tab 5. See other environmental records at Tab 7. See supplemental records at Tab 9.

	4 since 1988. Releases of pencil pitch, soda ash, from Pier 4 have been documented, as detailed further below. **Pier 5 (Berth 412 & 413)** Pier 5 consists of the Berth 412 area on the south side of Slip 3 and the former Berth 413 area on the river side southwest of the slip. Historically, Pier 5 was used for bulk cargo loading and unloading operations handling talc, iron, lead, zinc and copper ores, bentonite clay, coke, coal and briquettes, and for UPRR's fuel unloading operations. Berth 412 was equipped with a bulk outloader and associated equipment. The Berth 413 area consisted of a wharf structure and trestle pier. The 413 trestle pier (also known as the oil dock) was used by UPRR and its affiliates for unloading bunker and diesel fuels and transferring the materials through its pipeline to the St. John's tank farm adjacent to Terminal 4. The harbor-side wharf structure at Berth 413 was removed in 1962 but the finger pier remained for UPRR's continued use until approximately 1973 when it was removed. Bulk operations at Berth 412 were terminated in 1989. The wharf at Berth 412 was removed in 1997. **Wheeler Bay** The City of Portland and Multnomah County operated a fire boat station at Terminal 4 from approximately 1960 to 1980 and 1980 to 1995, respectively. The City of Portland utilized an approximately 1,000 gallon UST for storage of gasoline. Ore and other bulk raw products handled at Terminal 4 in 1921 through the present include: • Alumina (1984) Berth 412 • Ammonium (1995 to Present) Liquid bulk facility at Slip 1 • Ammonium Sulfate (1970) Pier 5 • Bauxite (1961, 1971, 1977 to 1984) Berth 411 • Bentonite (1977 to 1984) Berth 412 • Calcium Chloride (1995 to Present) Liquid bulk facility at Slip 1 • Caustic Soda (1985 to Present) Liquid bulk facility at Slip 1 • Chrome ore (1925, 1937, 1940 to 1941, 1961) Pier 5 and Pier 2 • Chromite (1956 to 1957) Pier 2 • Coal (1952 to 1958, 1977) Pier 5 • Diesel and Bunker C (1907 to 1989) Pier 5 • Ethyl alcohol (1995 to Present) Liquid bulk facility at Slip 1	

	• Fertilizer (1947 to Present) Liquid bulk facility at Slip 1 • Flour (1992 to Present) Slip 1 • Grain (1947 to 2003) Grain elevator and storage bins north of Slip 1 • Iron (1955 to 1957, 1979) Pier 2 • Iron Ore (1985) Berths 410 and 411 • Lead concentrate (1955 to at least 1969) Berths 406 to 408 and Berths 410 and 411 • Lignin sulfate/lignin (1947 to Present) Liquid bulk facility at Slip 1 • Limestone (1961, 1984) Unknown • Liquid animal feeds (1995 to Present) Liquid bulk facility at Slip 1 • Logs (1985) Berth 411 • Magnesium chloride (1995 to Present) Liquid bulk facility at Slip 1 • Manganese (1924 to 1925, 1977 to 1984) Berth 411 and 414 • Molasses (1947 to Present) Liquid bulk facility at Slip 1 • Motor oil (1953 to 1985) Head of Slip 3 • Nitrate (1995 to Present) Liquid bulk facility at Slip 1 • Palm oil (1995 to Present) Liquid bulk facility at Slip 1 • Pencil Pitch (1974 to 1998) Slip 3 • Petroleum Coke (1984) Slip 3 • Phosphoric acid (1961 to Present) Liquid bulk facility at Slip 1 • Polyethylene (2008 to Present) Liquid bulk facility at Slip 1 • Potash (1979 and 1985) Berth 410 and 411 • Propylene glycol (2000 to Present) Liquid bulk facility at Slip 1 • Pulp (1970 to 1971) Pier 1 • Rutile Sand (1968) Pier 2 • Soda Ash (1982 to 1984, 1986 to 1987, and 2000 to Present) Liquid bulk facility at Slip 1 • Steel (1987 to 1989) Unknown • Sugar and beet molasses (1995 to Present) Liquid bulk facility at Slip 1 • Sulfate of Potash (2008 to Present) Liquid bulk facility at Slip 1 • Sulfur (1921 to 1945, 1955 to 1967) Berths 412 and 413	

	• Talc (1977 to 1984) Berth 412 • Tallow (1947 to Present) Liquid bulk facility at Slip 1 • Tricaphos (1961) Pier 1 • Urea (1984, 1995 to Present) Liquid bulk facility at Slip 1 • Vegetable Oil (1947 to Present) Liquid bulk facility at Slip 1 • White Cement (1978 to 1980) Unknown • Zinc (1955 to at least 1969) Berths 406 to 408 and Berths 410 and 411 Available information from regulatory agencies and Port records were reviewed for information on spills and releases. It should be noted that most regulations mandating the reporting of spills and releases did not come into effect until after 1970; therefore, there are few if any reported spills and releases from before 1970. Based upon available records, the following over-water spills and spills into the river have been identified as follows: **Slip 1** • On May 11, 1971, according to a Coast Guard report, an oil slick associated with the S/S SHELLY was observed at Pier 1. • On May 27, 1971, according to a Coast Guard report, a release of grain occurred from the M/V ARGO MASTER at Pier 1. • On October 24, 1971, according to a Coast Guard report, a release of 15 gallons of oil occurred from the M/V JAY RATNA at Pier 1. • On November 9, 1971, according to a Coast Guard report, a release of bauxite occurred from the M/V MARABU PORR at Pier 2. • On December 6, 1971, according to a Coast Guard report, a release of 187 gallons of oil occurred from the M/V BURKSHIRE at Pier 1. • On December 6, 1971, according to a Coast Guard report, a release of bauxite occurred from Portland Stevedoring unloading operations at Pier 2.On December 19, 1971, according to a Coast Guard report, Jones Stevedoring and Cargill released grain into the Willamette River at Pier 1. • On March 20, 1972, according to a Coast Guard report, Cargill released grain into the Willamette River at Pier 1.	

	• On September 20, 1973, a minor spill occurred from a ship docked the night before at the grain berth. The U.S. Coast Guard was notified and attempted to clean up the spill. • On April 12, 1981, a release of a white chalky substance to the Willamette River occurred from the vessel LORENZO HALCOUSSI at Berth 412. The U.S. Coast Guard was notified. No further details were provided. • On April 20, 1981, a release of diesel fuel occurred at Berth 403 from a Chinese vessel. The slick was estimated at 550 ft. (quantity not reported). • On April 10, 1982, an oil spill was reported at Berth 401. The crewmen from YONEUN were reported to be in small boat trying to get the oil out with paper towels. The U.S. Coast Guard was notified. It was reported that the vessel had dumped its bilge water into the river. The slick was estimated at 100 ft. in length & 50 ft. in diameter. The slick was estimated at 100 ft. in length & 50 ft. in diameter. • On April 11, 1982, a release of oil to the Willamette River occurred following a spill on the deck at Berth 414. Approximately 1 gallon entered the river. No further details were provided. • On July 2, 1982, an oil slick was reported at Pier 2, Berth 408 2. The U.S. Coast Guard was notified and observed the spill. The Coast Guard reported that although not confirmed, the source may have been Barge #6 belonging to Pacific Molasses. The Coast Guard in turn followed up with Pacific Molasses. • On October 8, 1984, an oil spill was observed at Berth 405. Cargill reported that 2 to 5 gallons of gear grease had spilled out of a bucket by the grain hopper on Pier 1. Riedel Environmental responded to clean up the spill. • On August 17, 1988, an oil slick from the grain ship OCEAN LARK (a grain ship) was reported. The Coast Guard was subsequently notified. • On April 11, 1989, the vessel SANKO POPPY was bunkering and an overflow occurred, spilling oil into the slip at Pier 1. A containment boom was placed in the slip. • On April 25, 1989, 10 gallons of tallow was released from a ship line into Slip 1. The Coast Guard subsequently issued a Notice of Federal Interest in a Pollution Incident to Pacific Molasses for the release. • On February 16, 1991, an oil sheen and what appeared to be globules were observed at the stern of the vessel LEIRA at Berth 401. The U.S. Coast Guard was notified and investigated the observance. No further details were identified.	

	• On April 12, 1991, an oily film and what appeared to be sludge was observed between berth 403 and 408. The Coast Guard arrived and determined that substance was unknown and that it was not regular oil. It was determined that it was edible oil and grain dust. • On November 4, 1991, an oil spill from the vessel HELM STAR was observed at Berth 406. Riedel Environmental was contacted to clean up the spill. • On July 27, 1993, an approximately 5' X 5' sheen was caused by the release of 0.1 gallon of lubricating oil from packing gland on rudder post of vessel M/V ORIENTAL ANGEL at Berth 401. • On September 25, 1993, approximately ½ gallon of Chevron AW 32 hydraulic oil was spilled into the Willamette River when a hydraulic hose failed at the barge slip. Public agencies were notified, and a Cargill employee used absorbent pads to clean up oil from the river. Riedel Environment Services completed the cleanup. Cargill reported no visible sheen or odor after the cleanup was complete. • On February 17, 1994, during heavy rains mud, oil, and flotsam overflowed into the river at Berths 405 and 408 at the Cargill leasehold causing a sheen. • On March 22, 1994, an approximately 480 ft. X 300 ft. silvery sheen of unknown oil was observed within Slip 1 at Berth 408 around the vessel NAPIER STAR; sheen reportedly contained within the slip; quantity of material not reported. • On May 4, 1994, the vessel M/V OCEAN BEAUTY was discharging ballast at Berth 401 and a sheen was discovered around the vessel; quantity/material not reported. • On April 14, 1996, a boat sinking at Pier 2 caused a sheen on the water. • On April 8, 2001, the Tank Vessel ASTYPALEA leaked an estimated 50 gallons of oil in the river. The vessel was moored at Berth 408 while the remaining 180,000 gallons of oil in the fuel tank was transferred to a barge. The ship's crew, the Coast Guard, and the DEQ worked together to clean up the spill. • On October 18, 2003, fugitive dust emissions from Kinder Morgan's soda ash loading operation were observed. The dust was not swept and on October 19, 2003, the soda ash was washed into the river during a rain event. DEQ was notified of the incident. No further details were identified. • According to correspondence between the Port and DEQ in 2001 and 2003, sheens were periodically observed at the head of Slip 1.	

	Slip 3 • As described in the response to Question 11, releases of petroleum from the UPRR pipeline and oil dock operations occurred in and around Slip 3. A leak from the pipeline was discovered as early as 1970 and documentation of a release from the pipeline to the river was noted as early as December 15, 1970. Oil slicks were observed in Slip 3 on March 5, 1971 and December 28, 1971. On February 2, 1972, black oil was observed to be discharging from an old drain pipe of unknown origin at the southeast corner of Slip 3. Subsequent sheens have been reported in Slip 3 related to the petroleum seeps into the river from the UPRR operations (some are listed below). These petroleum releases and seeps to the river from the UPRR pipeline and related operations have been the subject of DEQ and EPA investigations and cleanups. See also responses to 51, 62 and 71. o As identified in the response to Question 11, Quaker State operated a motor oil packaging plant and related pipeline. In response to the observation of oil seeping into the head of Slip 3 between 1991 and 1993, the U.S. Coast Guard sampled the oil seep and identified lubricating oil as a component of the seep. See also responses to 51 and 62.discussed in responses to Questions 11, 51 and 62, from 1974 to 1998, pencil pitch was imported through Berths 410/411 at Terminal 4. Pencil pitch was unloaded from vessels by the Dravo unloader directly to rail car or trucks. Pencil pitch, which is also called coal tar pitch, is a by-product of the distillation of coal tar. Pencil pitch contains a mixture of lower and higher molecular weight PAH compounds. Pencil pitch handling at Terminal 4 may be divided into three periods: o From 1974 to 1978 or 1979, Martin Marietta Aluminum imported pencil pitch through Terminal 4, but information is lacking as to the entity which actually did the unloading during this period. o From at least 1978 or 1979 to 1985 (plus one shipment in 1987), Jones conducted the unloading of pencil pitch from vessels to rail cars or trucks pursuant to a series of contracts with the Port. Among other things, these contracts required Jones to take precautions to avoid pencil pitch spillage and dust emissions and to fully comply with all regulations and requirements of the	

	DEQ and the Coast Guard. During this period, the Port used its unionized maintenance employees to perform the fine cleanup of pencil pitch, debris, and dust, including washdown of the pier, after Jones had completed the unloading and performed required shoveling of visible pencil pitch and debris. From 1985 to 1987, SSA took over the unloading of pencil pitch at Terminal 4 from Jones. No specific contracts between the Port and SSA for this work have been found. The standard division of responsibility regarding the unloading of bulks and the union agreements would have governed unloading responsibility, with SSA responsible for unloading and leaving the pier and surrounding area shovel clean, and with the Port responsible for fine cleanup, similar to the Jones' operation. o From 1988 to 1998, Hall-Buck was responsible for handling the pencil pitch at Terminal 4. On October 30, 1987, the Port entered into a Terminal Use and Development Lease with Hall-Buck to handle bulk cargoes at Terminal 4, including pencil pitch. The lease terms included provisions whereby Hall-Buck agreed to make certain improvements to the Dravo as well as other measures designed to prevent pencil pitch spillage and improve pollution control, required that Hall-Buck comply with federal and local pollution control laws and regulations, and that Hall-Buck indemnify the Port. Until May 1993, the Port supplied Port employees to Hall-Buck to do pier cleanup. The Port employees were supervised by Hall-Buck. From May 1993 to 1998, Hall-Buck employees conducted the pier cleanup. • With respect to pencil pitch cargoes, the inventory was carefully managed by the entity conducting the unloading as it had to be reported to the shipment owner. Pencil pitch shipment information from 1974 to 1998 is found in attached Table 4. • Releases of pencil pitch occurred at Slip 3 during the years that pencil pitch was handled (1974 to 1998) and pencil pitch is known to be located in Terminal 4 sediments. Releases of pencil pitch into the environment during transfer from vessel to rail cars or trucks could occur in any of four ways: (1) losses of pencil pitch into the river or onto the vessel or pier as the Dravo clamshell bucket transferred the material from ship to unload hopper; (2) dust emissions from handling the pencil pitch at the ship, pier, rail car or truck; (3) cleaning of the pier after the pencil pitch transfer was completed; and	

	(4) cleaning of the vessel after the pencil pitch was unloaded. Due to the nature of the unloading operation from 1974 to 1998, it is likely that some amount of pencil pitch was lost during each unloading operation. Some releases were observed, reported upon, and/or enforcement action was taken. The reported incidents are listed on Table 5. • In November 1988, the United States Department of Justice notified the Port that it was planning to file an action against the Port for injunctive relief and civil penalties under the federal Clean Water Act for pencil pitch releases from Terminal 4. This notice resulted in a Consent Decree which was entered into by the Port and the United States in 1993. Page 4 of the Consent Decree lists a series of dates upon which the United States alleged that "illegal discharges" had occurred. Those dates match the pencil pitch shipments listed from November 1979 to April 1988 on Table 4. In other words, the Department of Justice simply assumed that some level of release took place during each unloading episode. These do not represent actual observed releases. • There is no per-release data which would support a precise calculation of the amount of pencil pitch lost into the Willamette River as a result of pencil pitch operations. One Port employee was reported to have estimated that four to five tons (8,000 to 10,000 pounds) of pencil pitch was lost to the river with each shipment. In March 1986, it was reported that 300 to 500 pounds of pencil pitch had been washed into the river. In August 1987, it was estimated that approximately 6 to 8 yards (12,150 to 16,200 pounds) of pencil pitch was spilled on the dock and contained on the Dravo that needed to be cleaned up, and 75% could be cleaned up by dry vacuum and a dry shakedown of the Dravo, leaving approximately 1 ½ to 2 yards (3,307 pounds to 4,050 pounds) to be washed and separated. In March 1988, less than 2 cubic feet (150 pounds) of pencil pitch dust was deposited on the pier. In 1997, there was a release estimated at 200 to 1,000 pounds. The alleged loss of four to five tons of pencil pitch per shipment is not consistent with the evidence. Other former Port employees state that this is a serious overstatement of the amount typically lost. A simple mass balance calculation based on Slip 3 PAH data reveals that such an estimate is high by at least one to two orders of magnitude. It is likely that there was some loss of pencil pitch with every shipment unloaded; however, the losses with respect to reported incidents were generally greater than those not reported, and that losses per shipment were generally larger during the Jones and SSA years than after Hall-Buck took over.	

	• During the period 1978 to 1987, Port employees under Port direction, conducted the fine cleaning of the pier following a pencil pitch shipment. Part of this procedure included a final washdown of the area, which included washing some pencil pitch residuals into the river. In late 1986, early 1987, the dock drains were plugged to eliminate pencil pitch runoff to the river, but the system proved to be ineffective. As part of its 1987 lease of the premises, Hall-Buck installed a wash water collection and treatment system. After mechanical and hand cleaning, the Dravo and the pier were washed down and the washdown water was directed to a new concrete washdown retention basin at the shore end of the pier where the Dravo was parked after use. Residual pencil pitch settled out in the washdown basin and the remaining water was pH controlled and pumped through a filter before discharge to the City sanitary sewer, and spent filter cake was properly landfilled offsite. While the new washdown water collection and treatment system was generally effective in eliminating washdown water discharges to the river, there were reports that some additional releases did occur. Other documented releases in Slip 3 include the following: • On March 24, 1971, an oil slick was observed at Terminal 4, Berth 4 and attributed to Marperfecta CIA Navigation S.A., Panama. • On May 7, 1971, a release of a small quantity of bauxite ore occurred to the Willamette River during unloading operations on the vessel M/V DONA AMALIA at Pier 4. • On April 30, 1974, on unknown quantity of sulfur was released in the Willamette River at Pier 5. No further details were identified. • On March 16, 1977, ammonium sulfate crystals were released into and near the Willamette River. No further details were identified. • On March 8, 1981, a large oil spill was found at Berth 414 after PACIFIC QUEEN departed and reportedly cleaned its bilges. The Coast Guard and DEQ were notified. • On January 30, 1985, an oil slick at the bow of the CELTIC PRINCESS at Berth 410 was observed. The vessel crew said they were not responsible for the oil slick and its origin remains underdetermined. • On December 5, 1988, observations of soda ash being discharged to the Willamette River from the Hall- Buck operation were documented. No further information identified.	

	• On May 26, 1989, a sheen was noted on Slip 3. • On June 2, 1991, Jones Oregon Stevedoring reported oil leaking out of bank at Slip 3. HAI investigated. • On June 14, 1991, an oil slick was reported at Berth 411 which appeared to be coming from the vessel HANDY PRINCE. A small hole was noted on the vessel where there was liquid coming out and going into the river. The Coast Guard was notified and they documented the spill. • On July 2, 1991, the U.S. Coast Guard observed a slight sheen at the head of Slip that appeared to be related to the seep at Berth 412. • On March 7, 1992, a leak at Berth 411 occurred from a Brix Maritime barge fueling the vessel GORGOVA. The U.S. Coast Guard and a Brix investigator came to the site to evaluate the release. • On March 10, 1992, a light rainbow sheen was observed on water at the head of Berth 412 behind Jones gearlocker. OTC was aware of situation and had notified the environmental authorities. • On April 7, 1992, during transfer at Berth 411, approximately 300 gallons of black oil was released; the spill was reportedly contained on the vessel KEN SPANKER. • On July 27, 1992, approximately 0.12 gallons of diesel released to river from overfilling during fueling operations on the carrier ANSAC PROSPERITY at Hall-Buck at Berth 411. Sorbents were used to collect the product. • In December 1992, the U.S. Coast Guard observed a minor oil release to the Willamette River at Slip 3. The Port contracted Century West to initiate the abatement of the migrating oil seep. • On December 25, 1992, approximately 10 gallons of a mixture of weathered light fuel and lube oils seeped into the Willamette River from soil at the east end of Berth 411. Floating booms were placed to contain further discharge. • On February 27, 1993, diesel was spilled while transferring material to the M/V MAY STAR at Berth 411; quantity not reported, spill reportedly contained on vessel. • On December 13, 1994, oil sheen from dredging was observed at Berth 411. • On March 27, 1996, a release of oil occurred during fuel transfer to the M/V ANSAC ASIA when a tank was overfilled at Berth 411; approximately 1 gallon of 2-D fuel oil	

	released to Willamette River; Riedel used sorbents to recover the material. • On April 16, 1993, oil was observed on the water in Slip 3. The oil was being discharged with the treated water from the oil/water separator. Foss Environmental Services responded to clean up the oil in the boom area. • On August 27, 1993, an oil spill at Berth 410 at the stern of the vessel ANANGEL HONESTY was observed. The Coast Guard was notified. The oil reportedly dissipated quickly. • On March 15, 1985, unknown quantity of oil was observed at Berths 410, 415, and 416. • On July 10, 1995, the Port observed an unknown substance being discharged from vessel Neo Pelargonium at Hall-Buck. The Coast Guard inspected the substance. • On May 13, 1996, a thin sheen was observed in the river near Berth 411 by Port and Hall-Buck employees. It appeared that the source was from one of two operations: a broken-down crane the Port had on the dock may have leaked oil during servicing, or Hall-Buck operations. Both the DEQ and the U.S. Coast Guard were notified. • On August 13, 1996, oil was observed in the Willamette River emanating from the sewer drain next to the Hall-Buck soda ash rail warehouse. No further details were identified. • On August 30, 1996, soda ash was spilled along the bull rail at the Hall-Buck leased premises. Hall-Buck personnel initiated cleanup activities that included washing the material into the Willamette River. Upon notification, Port personnel shut off the water to terminate the discharge into the river. No further details were identified. • On March 10, 1997, rain washed oil off of the deck of the vessel M/V SEMENA; quantity not reported; cleanup undertaken and scuppers on vessel plugged. Specific location at Terminal 4 not reported. • On May 20, 1997, approximately 1 teaspoon of 2-D fuel oil released during fuel transfer operations caused by a valve left open; vessel reported as M/V SEASWAN at Berth 411; absorbents used for cleanup of the spill. • On May 28, 1997, an approximately 25' by 25' sheen was discovered around and emanating from the vessel M/V MARITIME FAITH at Berth 411. The cause of the sheen was unknown and the quantity was not reported. • On April 18, 1997, an oil-like discharge was observed from the Hall-Buck leased premises. No further details were identified.	

	• On August 28, 1997, while dismantling the dock at Berth 412, an oil pipe line was cut and some product in the line spilled out. Foss Environmental cleaned up the spill. • On May 30, 2001, approximately one gallon of bunker fuel was released from the vessel AMORI Willow while it was docked at Berth 414. The Portland Fire Department and Clean Rivers Cooperative were on the scene and cleaned up the material. • On January 26, 2003, a residual sheen was observed on the Willamette River from a hydraulic fluid spill from the deck of the vessel SANKO ROBUST at Berth 410. Cowlitz Clean Sweep conducted the cleanup; quantity of material and source unknown. • On January 11, 2005, approximately 0.5 cups of oil released from an outboard motor on a "little skiff" associated with a crane barge in Slip 3; the cause was reported as equipment failure; cleanup completed and included applying booms & absorbents and the skiff was removed from the water. • On January 22, 2005, Advanced American Diving (AAD) was fueling a tank on its barge when it overflowed and released an unknown volume of oil into the Willamette River at Berth 410. AAD notified the Coast Guard and DEQ and began clean-up of its release. • On January 23, 2005, approximately 10 gallons of 2-D fuel oil was released from a crane barge due to an overfill with a piece of equipment; cleanup was initiated with booms and absorbents. • On May 31, 2005, a light sheen was observed on the water adjacent to Berth 408 after pilings were damaging and became located in the river by Barge B023. • On June 30 and July 8, 2005, the Barge BOAZ released approximately 20 gallons of lignin into the Willamette River. DEQ and OERS were both notified of the incidents. • On May 12, 2007, a sheen was observed on the water near Berth 410. The source and responsible party were not identified. No further details were identified. • On July 23, 2007, a sheen was noted at both Berths 410 and 416. The source, responsible party, and if the two observations were separate incidents, could not be confirmed. The U.S. Coast Guard was notified and no further action was required. • On November 7, 2007, a sheen was observed at Berth 410 following the departure of the vessel M/V STAR GINDANGER from Kinder Morgan. The U.S. Coast Guard was notified of the incident. • On October 18, 2011, a sheen was observed at Berths 410 and 411 and Wheeler Bay.	

	Significant pooling was discovered alongside the ARION. Notification was made to NRC, OERS, U.S. Coast Guard and the Port's response contractor. These environmental conditions in-water near Terminal 4 were also observed: • On January 11, 1985, 0.5 cup of gear oil was released into the Willamette River by a little skiff owned by Advanced American Diving. No further details were identified. • On August 10, 2003, a sheen and gasoline odor was observed at Berth 410 and 415. National Emergency Response indicated that a release of upriver at STC was the source of the sheen and odor • On June 29, 2006, an unknown milky white substance was observed in the Willamette River in the general vicinity of Berth 414. No further details were identified. • On July 3, 2007, a sheen was noted on the Willamette River extending from the Toyota area north to the vicinity of Slip 1. The U.S. Coast Guard was notified. No further information was identified. Lastly, from World War II to 1960, Shaver Transportation Company (Shaver) owned and operated a barge service, which included two dedicated sludge barges, the Oneonta and the Occident. Shaver would transport these barges to vessels and other waterfront operators and collect oily bilge water, sludges, wastes and other materials. Shaver subsequently towed the barges and pumped out the materials for disposal at its upland sump site in the Rivergate area of the Harbor. Records produced by Shaver in Oregon Steel Mills v. Port of Portland, Case No. 0201-00718 (Multnomah County Circuit Court) reflect that Shaver Transportation Company collected materials from one operator and four docked vessels at the City CPD's Terminal 4 between 1948 and 1959, including the vessel AGWIWORLD in February 1948, the operator Richfield Oil in September 1953, the vessel ROBIN HOOD in June 1956, the vessel COLORADO in December 1957, and the vessel TEPAN in July 1959. Review of these logs indicates some of the pickup locations correspond with Pier 5 (located on the south side of Slip 3). See documentation at Tab 8.	
23. For each Property at which there was or is a	See response to Question 22.	

mooring facility, dock, wharf or any over-water structure, provide a summary of over-water activities conducted at the structure, including but not limited to, any material loading and unloading operations associated with vessels, materials handling and storage practices, ship berthing and anchoring, ship fueling, and ship building, retrofitting, maintenance, and repair.	Ships docked at the berths periodically receive lubricating oils from tanker trucks on land or fuel from barges that direct-service the ships. Vessels or their agents contract directly for these services and are required to comply with applicable laws for such activities. Contractors servicing vessels are likewise responsible for their operations and are required to comply with applicable laws. No shipbuilding activities have occurred at Terminal 4.	
24. Describe all activities conducted on leased aquatic lands at each Property. Include in your description whether the activity involved hazardous substances, waste, or materials and whether any such hazardous substances, waste, or materials were discharged, spilled, disposed of, dropped, or otherwise came to be located on such leased aquatic lands.	In 1995, the Port obtained a lease with the State of Oregon Department of State Lands (ML-10321) for 0.423 acres of submerged land in Wheeler Bay for storage of Carr Marine's tugs, barges and marine-related equipment. See the response to Question 22 for the overwater activities, information on materials and hazardous substances, and spills that occurred at Wheeler Bay. The lease with DSL was canceled in 1999 when Carr Marine terminated its lease at Terminal 4. In 2004, the Department of State Lands entered into an agreement with the Port for access to DSL-owned land adjacent to Terminal 4. The access agreement allows the Port to conduct in-water work required under the Port's Administrative Order on Consent for the Early Action at Terminal 4. See also response to Question 12.	
25. Please describe the years of use, purpose, quantity, and duration of any application of pesticides or herbicides on each Property during the period of investigation (1937 to the present). Provide the brand name of all pesticides or herbicides used.	The U.S. constructed a disinfestations/fumigation plant at Terminal 4 in 1943. According to an annual report prepared by the Sub-Port of Embarkation Surgeon, the disinfestation plant was designed to delouse 150 men per hour along with their clothing and personal belongings and was equipped with methyl bromide as the disinfecting agent. No additional information was available. Cargill used Phostoxin tablets and historically sprayed a liquid form of Weevil-Cide onto the grain in the steel tanks (Building 150 and 151). Cargill historically sprayed Malathion onto selected shipments of wheat being loaded for export. The wheat was sprayed on a conveyor as	See agreements and contracts at Tab 1. See other environmental records at Tab 7.

	the wheat was being loaded. The operation ceased in 1997. Available records indicate that the use of pesticides and herbicides at Terminal 4 property by the Port is limited in nature and consists of the standard weed and pest maintenance that can be expected at a paved and developed industrial area. Pesticides and herbicide application occurs during dry weather and is limited to the paved portion of the property. The pesticides and herbicides used on the property have included Ranger Pro, Roundup Pro, Confront, Snapshot, InPlace, Nalco, Dimension 2 EW, Garlon 3A, Wil-Power, Simazine, Pendulum 2G, Pendulum Aquacap, Casoran, Regal Star, Crossbow, Windbreak, Oust, Kicker, Ad-Wet, Rodeo, Powerzone, Barricade, Gallery, Dimension Ultra, and L1700 Surfactant. Associated material safety data sheets (MSDSs) are included at Tab 7. Reports documenting quantities and application methods from 2000 through 2008 are also included at Tab 7. Application quantities and frequency vary but range from approximately 1 to 20 gallons of diluted solution, approximately four times a year since inception. Additionally, dimethoate insecticide was stored at Pier 1, House 4 in 1981.	
26. Describe how waste is transported off the Property for disposal are and ever were handled, stored, and/or treated prior to transport to the disposal facility.	Based on available records, wastes for which the Port has had responsibility at Terminal 4 have been transported from the property by licensed waste removal contractors and are handled prior to transport as follows: • Non-hazardous solid waste is collected in several large receptacles throughout the property. The containers are maintained by Waste Management, Inc. and are emptied periodically or as needed. • Non-hazardous wastes generated by specific projects are contracted for disposal as a component of the project. Typically, this waste is drummed or containerized and stored in designated areas of the terminal prior to disposal. Some waste soil has been generated at the terminal during terminal improvements and is currently stockpiled with appropriate erosion control mechanisms in place – see the response to Question 21 for more details on the stockpiles.	See agreements and contracts at Tab 1. See site investigation records at Tab 6. See other environmental records at Tab 7. See supplemental records at Tab 9.

	It should be noted that there are tenants at Terminal 4 Slip 1 and Slip 3 who also likely generate and handle waste.	
27. Has Respondent ever arranged for disposal or treatment or arranged for transportation for disposal or treatment of materials to any Property (including the Willamette River) within the Investigation Area? If so, please identify every Property that Respondent's materials were disposed or treated at in the Investigation Area. In addition, identify: a. the persons with whom the Respondent made such arrangements; b. every date on which Respondent made such arrangements; c. the nature, including the chemical content, characteristics, physical state (e.g., solid, liquid) and quantity (volume and weight) of all materials involved in each such arrangement; d. in general terms, the nature and quantity of the non-hazardous materials involved in each such arrangement; e. in general terms, the nature and quantity of any hazardous materials involved in each such arrangement; f. the owner of the materials involved in each such arrangement, if not Respondent; g. all tests, analyses, analytical results or manifests concerning each hazardous material involved in such transactions; h. the address(es) for each Property, precise locations at which each material involved in such transactions actually was disposed or treated; i. the owner or operator of each facility at which hazardous or non-hazardous materials were arranged to be disposed at within the Investigation Area: j. who selected the location to which the materials were	PCB materials from Terminal 2 were transported to Terminal 4, and PCB materials from Terminal 4 were transported to General Electric's plant at 2535 NW 28th Avenue, Portland, Oregon 97210. Details on these materials responsive to Question 27 are contained in the response to Question 47. Information on other materials taken from Terminal 4 to other properties in the investigation area was not found in available Port files.	See other environmental records at Tab 7.

to be disposed or treated; k. who selected the Property as the location at which hazardous materials were to be disposed or treated; and l. any records of such arrangement and each shipment.		
28. Describe the plants and other buildings or structures where Respondent carried out its operations at each Property within the Investigation Area (excluding locations where ONLY clerical/office work was performed).	With respect to Terminal 4, see response to Question 4 (c) above. With respect to other Port-owned properties within the Investigation Area, please refer to the 104e responses for each of those properties.	
29. Provide a schematic diagram or flow chart that fully describes and/or illustrates the Respondent's operations on each Property.	Not applicable. The Port did not conduct any activities at the Terminal 4 property that could be or were depicted in a schematic diagram.	
30. Provide a brief description of the nature of Respondent's operations at each location on each Property including: a. the date such operations commenced and concluded; and b. the types of work performed at each location, including but not limited to the industrial, chemical, or institutional processes undertaken at each location.	As described in response to Question 4 above, the Port is the current land owner of the Terminal 4 property and has owned the property since 1971. Since that time, the Port has acted primarily as the property manager for the tenants that lease the warehouses, yard space and berths at the property. As the owner, the Port engages in grounds maintenance (fencing and landscaping) and is responsible for maintaining property infrastructure (e.g., water and sanitary lines), berths (e.g., piling replacement), the non-leased areas, a majority of the rail yard and switches, and some terminal equipment. The Port also performs certain activities for tenants, which includes maintaining in good working order interior systems of leased structures (plumbing and sprinklers) and exterior structural components (windows, siding, roofs) as well as general maintenance of pavement and rail leads. From time to time, the Port also provided certain limited services to tenants related to such things as dock cleaning and handling the receipt, movement and delivery of some cargo. From 1985 to 1988, the Port's activities at Terminal 4 also included use of the gearlocker building for the Port's MFM department. Currently, MFM uses the gearlocker building to store a boat, spray equipment for weed control, ice melt and asphalt supplies, small equipment and parts, snow removal equipment, items for rail repair and construction, and various other items	See property transaction records at Tab 5. See site investigation records at Tab 6.

	for general maintenance. Specific information on current and historical tenants and their respective operations is discussed in response to Question 11.	
31. If the nature or size of Respondent's operations changed over time, describe those changes and the dates they occurred.	See response to Question 4.	
32. List the types of raw materials used in Respondent's operations, the products manufactured, recycled, recovered, treated, or otherwise processed in these operations.	Not applicable.	
33. Provide copies of Material Safety Data Sheets (MSDS) for materials used in the Respondent's operations.	MSDSs are included at Tab 7.	See other environmental records at Tab 7.
34. Describe the cleaning and maintenance of the equipment and machinery involved in these operations, including but not limited to: a. the types of materials used to clean/maintain this equipment/machinery; b. the monthly or annual quantity of each such material used. c. the types of materials spilled in Respondent's operations; d. the materials used to clean up those spills; e. the methods used to clean up those spills; and f. where the materials used to clean up those spills were disposed of.	Since acquiring the Terminal, the Port has acted primarily as the landlord for the tenants, which lease buildings and yard space and hold preferential berth use rights. Therefore, the Port does not perform "operations" in the sense identified in Question 34. From 1985 to 1988, the Port's activities at Terminal 4 included use of the gearlocker building for the Port's MFM department. MFM is responsible for maintaining the Port's marine terminals for operations performed by its tenants; also see response to Question 4 for more information on Port activities. In connection with those activities, some cleaning and maintenance of equipment was performed at the gearlocker during MFM's occupancy. However, details on the type of equipment, materials and the methods used were not identified in the available records. MFM currently uses the gearlocker building for storage of equipment, but maintenance is	

	performed off-site.	
35. Describe the methods used to clean up spills of liquid or solid materials during Respondent's operation.	The Port has implemented numerous Best Management Practices (BMPs) at the Terminal 4 property as part of its Environmental Management System (EMS) Program and continual improvement policy. Under the EMS, the Port provides guidance to employees on the practice of spill prevention and response. Individual tenants are responsible for management of spills on their respective leaseholds. In accordance with the Port's May 1, 2006 Stormwater Management Plan under the MS4 permit, the Port has implemented BMPs to reduce the likelihood of releases and potential exposure to stormwater systems. This includes implementation of a spill response program for Port-operated properties to prevent, contain and respond to spills that may discharge to the stormwater system. The Port has emergency response contractors on-call 24 hours a day and a procedure to notify the appropriate authorities and responsible persons. Also, see responses to Questions 47, 62, and 63 for responses performed for specific spills or releases.	See other environmental records at Tab 7.
36. For each type of waste (including by-products) from Respondent's operations, including but not limited to all liquids, sludges, and solids, provide the following information: a. its physical state; b. its nature and chemical composition; c. its color; d. its odor. e. the approximate monthly and annual volumes of each type of waste (using such measurements as gallons, cubic yards, pounds, etc.); and f. the dates (beginning & ending) during which each type of waste was produced by Respondent's operations.	See response to Questions 21, for information regarding wastes generated related to specific projects.	

37. Provide a schematic diagram that indicates which pan of Respondent's operations generated each type of waste, including but not limited to wastes generated by cleaning and maintenance of equipment and machinery and wastes resulting from spills of liquid materials.	Not applicable. The Port did not conduct any activities that could be or were depicted in a schematic diagram.	
38. Identify all individuals who currently have and those who have had responsibility for Respondent's environmental matters (e.g. responsibility for the disposal, treatment, storage, recycling, or sale of Respondent's wastes). Also provide each individual's job title, duties, dates performing those duties, supervisors for those duties, current position or the date of the individual's resignation, and the nature of the information possessed by such individuals concerning Respondent's waste management.	The Port is the current owner of the Terminal 4 property. The following current employees have (or have had) responsibility for the Port's environmental matters associated with Terminal 4: • David Breen, Environmental Project Manager II • Sebastian Degens – Marine Planning & Development Manager • Jennifer Fonseca-Littrell – Environmental Specialist I • Marla Harrison – Marine & Industrial Development Environmental Manager • Stan Jones, Aviation Environmental Compliance Manager • Kelly Madalinski, Environmental Project Manager II • Sam Ruda, Director of Marine & Industrial Development • Dorothy Sperry, Corporate Environmental Manager • Richard Vincent, Environmental Project Manager II • David Ashton, Assistant General Counsel Former employees who have had responsibility for the Port's environmental matters associated with Terminal 4 include, but may not be limited to: • John Childs, Environmental Project Manager II (1997-2003) • Katherine Futornick, Corporate Environmental Manager (1994-1999) • Danil Hancock, Waterway Resources Manager (1988-1994) • Russell Korvola, Environmental Services Manager (1988-1995) • Cheryl Koshuta, Chief Environmental Officer (1999-2007) • Nicole LaFranchise, Environmental Project Manager III	

	• Kristi Maitland, Environmental Project Manager II (2003-2005) • Jim McKenna, Lower Willamette Program Manager (2003-2010) • Roland Montagne, Environmental External Affairs Manager (1986-1999) • Don Pettit, Environmental Project Manager II (2005-2007) • Quentin Pitts, Manager, Project Environmental Resources (1995-1996) and Environmental Project Manager II (2006-2008) • Padraic Quinn, Environmental Project Manager II (1993-2002) • Denise Ragland, Marine Superintendent II (1967-2003) • Jack Sabin, Environmental Planner/Environmental Management Specialist (~1978-1988) • Anne Summers, Environmental Project Manager III (2001-2008)	
39. For each type of waste describe Respondent's contracts, agreements or other arrangements for its disposal, treatment, or recycling.	See the response to Questions 6 and 26.	See agreements and contracts at Tab 1. See other environmental records at Tab 7. See supplemental records at Tab 9.
40. Provide copies of such contracts and other documents reflecting such agreements or arrangements: a. state where Respondent sent each type of its waste for disposal, treatment, or recycling; b. identify all entities and individuals who picked up waste from Respondent or who otherwise transported the waste away from Respondent's operations (these companies and individuals shall be called "Waste Carriers" for purposes of this	Copies of disposal contracts and agreements are included at Tab 1. Documentation of disposal arrangements can also be found in Tab 7 and Tab 9. See response to Questions 6 and 26 for information pertaining to types of waste, waste carriers, and disposal locations.	See contracts and agreements at Tab 1. See other environmental records at Tab 7. See supplemental

Information Request); c. if Respondent transported any of its wastes away from its operations, please so indicate; d. for each type of waste specify which Waste Carrier picked it up; e. indicate the ultimate disposal/recycling/treatment location for each type of waste. f. provide all documents indicating the ultimate disposal/recycling/treatment location for each type of waste; and g. state the basis for and provide any documents supporting the answer to the previous question.		records at Tab 9.
41. Describe all wastes disposed by Respondent into Respondent's drains including but not limited to: a. the nature and chemical composition of each type of waste; b. the dates on which those wastes were disposed; c. the approximate quantity of those wastes disposed by month and year; d. the location to which these wastes drained (e.g. septic system or storage tank at the Property, pre-treatment plant, Publicly Owned Treatment Works (POTW), etc.); and e. whether and what pretreatment was provided.	The following is a summary of permitted discharges to sanitary sewer at the Terminal 4 property. **<u>Discharges by the Port</u>** • On March 11, 1985, DEQ issued Waste Discharge Permit 999865 to the Port for the dry bulk handling area. The permit was not available in Port records. • On October 2, 1987, the City of Portland issued a conditional permit for a one-time discharge of wastewater generated from pencil pitch unloading to the sanitary sewer, which flows to the POTW. • On January 29, 1988, the Port and Hall-Buck requested permission from the City of Portland to conduct a one-time temporary hookup and discharge pencil pitch wastewater into the sanitary sewer, which is connected to the POTW, in late March or early June 1988. • On April 15, 1988, the City of Portland granted approval to the Port to discharge wastewater generated from cleanup of Berth 412 loading dock to the sanitary sewer system, which flows to the POTW. The Port was allowed to discharge to the sanitary sewer four times between April 19 and August 1, 1988 and only after the wastewater had been allowed to settle in containment for a minimum of 48 hours. • On September 8, 1997, the City of Portland issued a one-time Industrial Wastewater Batch Discharge Permit (Batch-1997-065) to the Port to discharge 17,000 gallons of rainwater and washdown water at Berth 412. The discharge occurred on September 17	

	and 18, 1997 and totaled 7,800 gallons of water. • In 2004, the City of Portland issued an Industrial Wastewater Batch Discharge Permit (Batch-2004-027) to the Port to discharge 33,000 gallons of water from dredging activities to the City's sanitary sewer system, which flows to the POTW. • Between August 5 through 9, 2004, the Port discharged 33,690 gallons of wastewater from maintenance dredging operations to the sanitary sewer, which flows to the POTW. • In 2005, the City of Portland issued an Industrial Wastewater Batch Discharge Permit (Batch-2005-028) to the Port to discharge 33,000 gallons of water from dredging activities to the City's sanitary sewer system, which flows to the POTW. • On August 1, 2005, the Port discharged 33,000 gallons of wastewater from maintenance dredging operations to the sanitary sewer, which flows to the POTW. • In 2008, the City of Portland issued an Industrial Wastewater Batch Discharge Permit (Barth-2008-003) to the Port to discharge waste water from storm water system cleaning activities to the City's sanitary sewer system, which flows to the POTW. o Between October 7 and November 24, 2008, the Port discharged 12,299 gallons of decant water from terminal sweeping activities to the sanitary sewer. o On February 26, 2009, the Port discharged 1,848 gallons of decant water from terminal sweeping activities to the sanitary sewer. • In 2008, the City of Portland issued Batch Discharge Permit 2008-027 to the Port for Phase I of the Terminal 4 Removal Action, which was initiated in August 2008 and completed in October 2008. Under the permit, the Port discharged 262, 830 gallons of elutriate water from dredging activities to the sanitary sewer during October 2008. **Discharges by Others** • A steam cleaning structure was constructed by the City CPD near the boiler house and car cleaning pit in 1964 for the purpose of cleaning vehicles and equipment. The surface area was sloped and directed surface water to a drainage line. The steam cleaner was removed in 1998. • On September 28, 1987, the City of Portland issued an Industrial Waste Discharge Permit 400-021 to Lee Babcock to discharge up 17,500 gallons per day of treated wastewater from the sheep quarantine area into the City sanitary sewer, which flows to the POTW. The permit expired October 1, 1992.	

	• On July 22, 1988, Waste Discharge Permit No. 10039 (EPA Reference No. OR-003140-2) was transferred from the Port to Hall-Buck Marine. • On September 1, 1991, City of Portland issued waste discharge permit (400-027) to Hall-Buck Marine to discharge industrial wastewater to the sanitary sewer system, which flows to the POTW. The permit expired on August 1, 2005. • Between February 21 and 25 [or March 1 and 4], 1992, during unloading of the vessel the M/V AGNESS, Hall-Buck released pencil pitch into the air. Fugitive dust from the release covered aluminum ingots being unloaded at Slip 1 Pier 2 and that operation had to be shut down pending cleanup of the material. Hall-Buck agreed to conduct a washdown of the affected areas and washdown water was subsequently collected and discharged to the sanitary sewer under Hall-Buck's Permit 400-027. Information regarding permits held by the Port and others associated with bulk product wharfing at Terminal 4 is still being assembled and, as with the rest of this response, the Port's answers will be modified and supplemented in future. Available Port records regarding the waste streams and permits are provided at Tab 7.	
42. Identify any sewage authority or treatment works to which Respondent's waste was sent.	Discharges went to the City of Portland Publicly Owned Treatment Works (POTW).	
43. Describe all settling tank, septic system, or pretreatment system sludges or other treatment wastes resulting from Respondent's operations.	The Terminal 4 property was served by septic systems until 1972 when the Port installed sanitary sewer lines that connected to the City of Portland's municipal sewer system. On April 15, 1988, the City of Portland granted approval to the Port to discharge wastewater generated from cleanup of Berth 412 loading dock to the sanitary sewer system. The Port was allowed to discharge to the sanitary sewer four times between April 19 and August 1, 1988 and only after the wastewater had been allowed to settle in containment for a minimum of 48 hours. During the washdown, the wastewater was pumped into the bermed area at the gearlocker building (the former Quaker State tank farm) for settling before being discharged to the sanitary	

	sewer system. No other records have been located that identify settling tank, septic system, or pretreatment system sludges or other treatment wastes for any Port activities at the Terminal 4 property.	
44. If applicable, describe the facilities, processes and methods Respondent or Respondent's contractor used, and activities engaged in, either currently or in the past, related to ship building, retrofitting, maintenance or repair, including, but not limited to, dry-docking operations, tank cleaning, painting and re-powering.	To the Port's knowledge, neither the Port nor the Port's contractors used Terminal 4 for activities related to shipbuilding, ship maintenance or repair.	
45. Describe any hazardous substances, wastes, or materials used or generated by the activities described in response to the previous Question and how these hazardous substances, materials and wastes were released or disposed of.	Not applicable.	
46. Provide copies of any records you have in your possession, custody or control relative to the activities described in response to the previous two Questions.	Not applicable.	
47. Describe any process or activity conducted on a Property identified in response to Question 4 involving the acquisition, manufacture, use, storage, handling, disposal or release or threatened release of polychlorinated biphenyl(s) ("PCB(s)" or PCB(s)-containing materials or liquids.	The only known use of PCBs at Terminal 4 was in electrical equipment or fluorescent light ballasts that normally contained PCB oil at that time of use, and as an ingredient for exterior paint on the Cargill grain tanks. Between 1988 and 1998, PCB-containing electrical equipment at Terminal 4 was replaced and no PCB-containing equipment remains at Terminal 4. According to aerial photographs and area drawings from 1919 to 1976, a transformer house was located east of the grain storage building. The building was reportedly demolished in 1977. Port drawings indicate that transformers were stored in the basement of the building. The 2004 RI Work Plan identified two additional areas at Terminal 4 Slip 1 where PCB-containing	See property transaction records at Tab 5. See site investigation records at Tab 6. See other environmental records

	transformers were located. See Figure 7 from the RI for the approximate locations. Westinghouse removed and transported PCB-containing equipment off-site from the Cargill operation in 1977. No additional information was available. Hahn and Associates, Inc. (HAI) was contracted in 1989 to drain 6 large transformers and two small pole-mounted transformers containing low-level PCBs. The oil was placed in drums for disposal by a qualified contractor and the transformer casings were disposed of at St. Johns Landfill. When transformers became regulated, the Port required inspections. The records produced at Tab 7 detail observed conditions. The following lists the equipment, location, and date of removal of PCB-containing transformers from Terminal 4. • M-287005 (Serial #C862333) 225 KVA in Crane 357 (Dravo) – Removed from the Dravo Crane by Reidel Environmental Services in June 1988. PCB-containing oil was placed in drums and the transformer stored at Terminal 4, Pier 1, House 5. Disposition records indicate the Transformer was destroyed in April 1990. • M-287018 (Serial #C862942) 500 KVA at Pier 4 – Removed in May 1989 and shipped to disposal facility in March 1990 • M-287019 (Serial #C862941) 1725 KVA at Pier 4 – Removed in June 1989 and shipped to disposal facility in March 1990 • M-287021 (Serial #YAR-76971) 500 KVA Pier 2 – Removed in August 1989 and shipped to disposal facility in March 1990 • 316 (Serial #N125108YGSA) Berth 304, Pier 1, House 4 – Disposed in December 1994 • Serial #1626333 Gearlocker – Disposed on March 29, 2004 • Serial # 1626334 Gearlocker – Disposed on March 29, 2004 • No Mfg. Tag Gearlocker – Disposed on March 29, 2004 • 313 (Serial #9909617) 167 KVA Pier 5 Substation – Removed in October 1998 • 314 (Serial #9908528) 167 KVA Pier 5 – Removed in October 1998	at Tab 7.

	• 315 (Serial #9909616) 167 KVA Pier 5 Substation – Removed in October 1998 • Hill Transformer Co. (Serial #1497971) 75 KVA – Disposed in March 1990 • Pittsburgh Trans. Co. (Serial # 701877) 75 KVA – Disposed in April 1990 • Allis Chambers (Serial #2873995) 15KVA – Disposed in April 1990 PCB-containing materials from various Port properties were stored and staged in Warehouse 5 prior to removal and disposal. Based on available records, some of the PCB materials listed above were transported to the General Electric's (GE) plant at 2535 NW 28th Avenue, Portland, Oregon 97210 prior to disposition as follows: 1. March 19, 1990, materials transported (transporter unknown): a. 7 Transformers b. 3 Dirt Drums c. 3 Debris Drums d. 64 Crushed Drums e. 1 Switch Box 2. March 30, 1990, materials transported by Riedel Environmental Services. f. PCBs in Metal Box 10,091 kg g. PCBs in Metal Box 3,048 kg h. PCBs in Drum 1,630 kg i. PCBs Drum 4,200 kg 3. March 31, 1992, materials transported by Riedel Environmental Services. a. PCB Transformer 1,200 kg b. PCB Transformer 1,800 kg 4. June 16, 1992, materials transported by Riedel Environmental Services. a. PCB liquids in Metal Box 1,800 kg GE provided manifests confirming the final disposition of the above PCB materials. The following summarizes the dates and location of final disposal (provided in parentheses): 1. April 19, 1990 by Envirosafe Services of Idaho, Inc. (Boise, Idaho) 2. April 30, 1990 by Envirosafe Services of Idaho, Inc. (Boise, Idaho)	

	3. May 8, 1990 by Rollins Environmental Service Inc. (Deer Park, Texas) 4. May 15, 1990 by Envirosafe Services of Idaho, Inc. (Boise, Idaho) 5. May 25, 1990 by CWM Chemical Services (Chicago, Illinois) 6. June 5, 1990 by CWM Chemical Services (Chicago, Illinois) 7. June 28, 1990 by Envirosafe Services of Idaho, Inc. (Boise, Idaho) 8. July 13, 1990 by Environmental Systems Company (Little Rock, Arkansas) 9. April 7, 1992 by Envirosafe Services of Idaho, Inc. (Boise, Idaho) 10. April 13, 1992 by Envirosafe Services of Idaho, Inc. (Boise, Idaho) 11. May 14, 1992 by Aptus Environmental Services (Aragonite, Utah) 12. May 21, 1992 by Aptus Environmental Services (Aragonite, Utah) 13. June 25, 1992 by USPCI (Lakepoint, Utah) 14. July 1, 1992 by Envirosafe Services of Idaho, Inc. (Boise, Idaho) 15. August 7, 1992 by Envirosafe Services of Idaho, Inc. (Boise, Idaho) The following PCB leaks and spills were identified at Terminal 4: • On April 25, 1989, approximately 35 gallons of PCB-containing fluid was released at the Pier 4, Berth 411 electrical substation by W.R. Grasle Company. The spill was contained within the transformer room and an underlying utility tunnel. A cleanup was conducted by Riedel Environmental Services under EPA oversight. Chemical Waste Management (CWM) transported and disposed of the contaminated soils from the PCB spill to their operation in Arlington, Oregon. • On October 10, 1990, a light fixture/capacitor outside the Matson Warehouse at Pier 2 was bumped by a forklift and released a small amount oil. HAI responded and sampled the material and confirmed it contained PCBs. Chempro was contracted to properly clean up the spill, which included cleaning the light fixture and removing a section of affected asphalt. The following PCB waste materials listed below were identified in waste profiles, use determinations and manifests, but only limited information was available: • PCB-containing transformer oil • PCB-containing solids, liquids, and capacitors • Lamp Ballasts with PCBs and non-PCBs.	

	• Transformer Oil (less than 50 ppm PCB) 215 gallons • PCB Ballasts, PPE, Rags (1-55 gal drum) • PCB Light Ballasts • PCB Light Ballasts • PCB-cleanup material from April 28, 1989 spill of transformer oil. Includes sorbent material, PPE, rags, soil, and rocks (44 drums). • Hazardous Substance, solid, n.o.s. 9, UN3077 (PCBs) (1 drum – 115 k) – • Hazardous Liquid (PCBs), n.o.s. ORM-E, NA 9188 (1 drum – 200 kg) – 51991 in 1991 • Hazardous Liquid (PCBs), n.o.s. ORM-E, NA 9188 (3 drums – 600 kg) – 51991 in 1991 • 7 transformers, 12 PCB Oil drums (>500 ppm), 2 drums containing PCB oils (50≤x≥500), 4 drums containing PCB solids (rags, pads, gloves), 1 capacitor, and 1 empty drum. Manifest 33001 • PCB debris (130 lbs. – Manifest 88229) • PCB debris from spill clean-up (4/295/89) • PCB material from 1 transformer Manifest 20880 • PCB cleanup debris (.27 cubic yards) Manifest 74881 • Dielectric fluid contaminated with PCE – 1 55 gal drum Manifest 63944 • Large PCB Capacitors Manifest BF3963-042 • Decontamination water from PCB spill Manifest K97255 • Decontamination water from PCB spill Manifest K97256 • Hazardous Substance, n.o.s. ORM-E, NA9188 (PCBs) 1 drum Manifest 10791 The following contractors were responsible for removing and ensuring proper disposal of the above-referenced PCB-containing materials and equipment: • Aptus Environmental Services • Chemical Waste Management • Chempro • Envirosafe Services of Idaho, Inc. • General Electric Co. • HAI • Phillips Environmental, Inc.	

	• Spencer Inc. Prior to demolition of the Cargill grain tanks, samples of the paint from the exterior were collected for analysis to assist in characterizing the tanks for recycling. Results indicated that, in addition to metals, PCBs were present in the paint. Waste derived from the demolition of the grain tanks were placed in ODOT-approved drums and then moved to drop boxes. A total of 96.83 tons of material were disposed of at Chemical Waste Management's Subtitle C Landfill in Arlington, Oregon. See also the response to Question 27 above.	
48. For each process or activity identified in response to the previous Question, describe the dates and duration of the activity or process and the quantity and type of PCB(s) or PCB(s) containing materials or liquids.	See response to Question 47 above. No additional information was available.	
49. For each process or activity identified in response to the previous two Questions, identify the location of the process or activity on the Property.	See response to Question 47.	

Section 5.0 - Regulatory Information		
50. Identify all federal, state and local authorities that regulated the owner or operator of each Property and/or that interacted with the owner or operator of each Property. Your response is to address all interactions and in particular all contacts from agencies/departments that dealt with health and safety issues and environmental concerns.	Environmental regulators/authorities include: • Federal – EPA, Army Corps of Engineers, U.S. Coast Guard, National Marine Fisheries Service (NMFS), US Fish and Wildlife Service (USFWS) • State – Oregon DEQ, Oregon DSL, Oregon State Fire Marshal, Oregon Department of Transportation (Wanda Kennedy), Oregon Water Resources Division, Oregon Fish & Wildlife • Local – City of Portland Bureau of Environmental Services, City of Portland Land Use Hearings Office, City of Portland Office of City Auditor, City of Portland Fire Bureau, City of Portland Bureau of Planning, City of Portland Harbormaster Health and safety regulators/authorities include: • Federal - U.S. Department of Labor, Office of Worker's Compensation Programs; Coast Guard • State - State of Oregon, Department of Consumer and Business Services; State of Oregon Worker's Compensation Division; Oregon OSHA • Local - City of Portland Police Bureau; City of Portland Fire Bureau; Multnomah County Sheriff's Department Individual contacts within the above organizations are included in the documents in the attached.	
51. Describe all occurrences associated with violations, citations, deficiencies, and/or accidents concerning each Property during the period being investigated related to health and safety issues and/or environmental concerns. Provide copies of all documents associated with each occurrence described.	The following occurrences were identified in available records (post-1971); note that the list is not limited to concerns raised with the Port, and includes concerns raised with Port tenants to the extent the Port had those records available; also note that while certain violations were issued to the Port, the Port's tenant may have been the entity responsible for the operations that caused the violation or notice.	

	The following accidents and injuries were identified in the available records: • On March 18, 1977, a Marine Terminals Accident Report was completed following injuries to a staff person sustained during repairs on the Dravo Loader at Berth 411. The injured person was taken off-site for medical attention. No further details were provided. • On June 14, 1977, a State of Oregon Worker's and Employer's Report of Occupational Injury or Disease was completed when talc particles fell into the eye of a berth agent. The injured person received medical attention off-site. No further details were provided. • On May 2, 1978, a Supervisor's Accident Investigation Report was completed following a wrist injury during a fall at Berth 412. Medical attention was sought off-site. No further details were provided. • On November 21, 1979 a U.S. Department of Labor Employer's First Report of Injury or Occupational Illness form was completed following a Longshoreman's illness after exposure to pencil pitch. No further details were provided. See the response to Question 22 regarding the pencil pitch unloading activities. • On July 10, 1981 a US Department of Labor Employer's First Report of Injury or Occupational Illness form was completed following a Longshoreman's face and hand exposure to chemicals in cleaning equipment. No further details were provided. • On July 11, 1981, four State of Oregon Worker's and Employer's Report of Occupational Injury or Disease was completed following exposure to insecticide and subsequent illness. Medical attention was sought off-site. No further details were provided. See the response to Question 62 regarding the leaking of dimethoate insecticide barrels that were stored outside House 4 at Pier 1. • On July 13 through 15, 1981, reports for U.S. Department of Labor Employer's First Report of Injury or Occupational Illness were completed following exposure to insecticide and subsequent illness. No further information was identified. See the response to Question 62 regarding the leaking of dimethoate insecticide barrels that were stored outside House 4 at Pier 1. • OnAugust 3, , 1981, a Port Accident Report and a U.S. Department of Labor Employer's First Report of Injury or Occupational Illness were completed following employee complaints of skin exposure and burns from pencil pitch at the Dravo Crane.	

	No further details were provided. • On November 8, 1982 a Port Accident Report was completed following an employee's complaint of soda ash ocular exposure. No further details were provided. • On January 10, 1983 a Port Accident Report was completed following an employee's complaint of a sore throat after soda ash exposure. No further details were provided. • On July 25, 1983, a Supervisor's Incident/Accident Report was completed following an employee's report of exposure to oil containing PCBs at the Dravo House oil room. No further details were provided. • On November 28, 1983, a Supervisor's Incident/Accident Report and U.S. Department of Labor Employer's First Report of Injury or Occupational Illness was completed following continual skin exposure to soda ash. Medical attention was sought off-site. No further details were provided. • On November 30, 1983, a Supervisor's Incident/Accident Report was completed following skin irritation from soda ash exposure. No further details were provided. • On September 23, 1985, a Supervisor's Incident/Accident Report and US Department of Labor Employer's First Report of Injury or Occupational Illness was completed following eye irritation from pencil pitch exposure. No further details were provided. See the response to Question 22 regarding the pencil pitch unloading activities. • OnJune 12 through 15, 1986, a Supervisor's Incident/Accident Report and State of Oregon Worker's and Employer's Report of Occupational Injury or Disease were completed after exposure to pencil pitch from trucks hauling the cargo and the vessel KOGGERGRACHT. Personnel suffering from sinus infection sought medical attention off-site. No further details were provided. See the response to Question 22 regarding the pencil pitch unloading activities. • On July 25, 1986, the Port received a citation from the State of Oregon, Worker's Compensation Department (M6077-112-86) for equipment blockage, fall hazards, limited access to an eyewash fountain, and distance exceedance on a safety guard for welding equipment. • November 5, 1986, a Longshore Incident/Accident Report form was completed following a back injury experienced during a fall at Berth 412. No further details were provided. • On December 19, 1987, a Longshore Incident/Accident Report form was completed	

	after an employee suffered an eye injury during unloading activities at Berth 5. No further details were provided. • On January 29, 1988, a Longshore Incident/Accident Report form was completed after an employee experienced a knee injury from a fall at Pier 5. No further details were provided. • On March 29, 1988, a First Medical Report form was completed following a Longshoreman's exposure to blowing pencil pitch dust. No further details were provided. See the response to Question 22 regarding the pencil pitch unloading activities. • On December 4, 1989, a Supervisor's Incident/Accident Report and State of Oregon Worker's and Employer's Report of Occupational Injury or Disease were completed after an employee experienced eye irritation from soda ash exposure. No further details were provided. • On December 26, 1989, a Marine Terminals Security Accident Report was completed following injuries sustained by a longshoreman after falling off a ladder in a hatch on the vessel KEIZERGRACHT. The injured person was taken off-site for medical attention. No further details were provided. • On July 27, 1991, a Marine Terminals Security Accident Report was completed following complaints of eye irritation from several West Coast Marine Cleaning employees during cleaning of pencil pitch from the hatches of the vessel BALSA 9 moored at Berth 414. Emergency response personnel arrived at Terminal 4 to provide medical attention. No further details were provided. • On May 7 and 8, 1989, a Supervisor's Incident/Accident Report was completed after an employee suffered burns from soda ash exposure at the Hall-Buck leasehold. The injured person was taken off-site for medical attention. No further details were provided. • On May 9 1993, a Supervisor's Incident/Accident Report was completed following skin irritation from soda ash exposure. No further details were provided. • On August 31, 1994, a Marine Terminals Security Accident Report was completed after a longshoreman complained of chest pain and shortness of breath. The longshoreman was removed from the area and transported off-site for medical attention. No further details were provided.	

	• On January 5, 1995, a Marine Security Special Report was completed after three longshoremen complained of exposure to a fumigant at the Cargill leasehold. The longshoremen were removed from the area and transported off-site for medical attention. No further details were provided. • On July 30, 1996, a Supervisor's Incident/Accident Report was completed after an employee was exposed to pencil pitch. No further details were provided. • On January 26, 2002, Port Incident Report #02-4-0021 was completed following a fall by a Kinder Morgan staff person at Berth 410. No medical attention was sought. The following citations, violations or deficiencies were issued to the Port for Terminal 4: • On May 1, 1973, the Port received the U.S. Coast Guard Violation Report 5923 SER MEP 432 for improperly labeled containers received by Matson personnel from the SS CALIFORNIA. The Port subsequently informed the U.S. Coast Guard of the appropriate responsible party (Matson Terminal, Inc.). • On August 5, 1974, DEQ issued Notice of Violation #2601 for particulate matter being emitted in excess of DEQ standards by Jones-Oregon Stevedoring. • On January 14, 1975, the U.S. Army Corps of Engineers issued a violation to the Port for allowing a barge in a derelict condition to become deposited in the Willamette River. It was later determined the barge floated up to Terminal 4 and was not owned by or related to Port activities. • On May 2, 1977, DEQ issued a Notice of Violation and Intent to Assess Civil Penalty WQ-PR-77-96 for a release of ammonium sulfate crystals by Portland Stevedoring into and near the Willamette River on March 16, 1977. • On May 19, 1980, DEQ initiated enforcement action (NP-NWR-80-78) • for excessive noise pollution in association with the bulk outloader. • On October 16, 1980, DEQ issued Notice of Violation AQ-NWR-80-171 to the Port for excessive fugitive dust emissions from loading of bentonite clayby Jones Oregon Stevedoring. • The Port noted that on May 3, 1983, it had received two complaints about soda ash emissions at Terminal 4. By letter dated June 6, 1983, DEQ notified the Port of the need for an air contaminant discharge permit as a result. • On July 11, 1984, DEQ issued Notice of Violation NWR-AQ-84-55 to the Port for	

	excessive fugitive emissions from the rail car unloading and ship loading that the agency observed during its inspections of Terminal 4 on April 10, 1984 and May 3, 1984 of operations performed by Jones Oregon Stevedoring or Rogers Terminal and Shipping Corp. • On December 2, 1986, the U.S. Coast Guard issued a Notice of Federal Interest in a Pollution Incident for a release of hazardous material (pencil pitch) into the river. . • A May 29, 1987 DEQ inspection report indicates DEQ sent a Notice of Violation for failing to provide reports as required under NPDES Permit 100039. No additional information was available. On June 16, 1987, DEQ issued Notice of Violation NWR-WQ-87-75 to the Port for not submitting monthly monitoring reports as required by the Port's permit. • On July 15, 1987, the Port received citations from the State of Oregon, Worker's Compensation Department for employee exposure to hazardous chemicals when bulk cargoes were discharged off ships. The citation stated that employees were not protected or informed of the hazards of the chemicals. On August 24, 1987, the Oregon State Department of Insurance and Finance, Accident Prevention Division issued Citation Number 04238-018-87 to the Port for not providing training to employees on hazardous chemicals in their work area and because exposure to a harmful material was not controlled by feasible method. On September 9, 1987, the State certified the Port made the necessary corrections. • On November 5, 1987, DEQ issued a Notice of Violation for pencil pitch release to the Willamette at Berth 411 • On May 19, 1988, DEQ issued a Notice of Violation for opacity and dusting at Berth 412 attributed to Hall-Buck's operations. On July 13, 1988, DEQ issued Civil Penalty AQ-NWR-88-53 for emission violations, including a dust cloud observed on May 19, 1988 and prior observations of fugitive dust emission violations • • On July 25, 1989, Notice of Violation AQ-NWR-89-119 was issued following Notices of Non-compliancenotices due to soda ash spills by Hall Buck. • On February 5, 1993, , the Port received a Notice of Federal Interest for an Oil Pollution incident at Berth 411 and 412 from the U.S. Coast Guard. • On January 13, 1993, the U.S. Coast Guard issued a Notice of Designation to the Port	

	identifying Terminal 4 as the source of a mixture of extremely weathered light fuel and lube oils discharged to the river on December 25, 1992. • In 1993, the U.S. Coast Guard issued a Water Pollution Violation Report related to a seep of oil into Slip 3. Laboratory analyses of samples of the oil seep identified severely degraded light fuel oil mixed with lubricating oil and light fuel oil. • Discharges in violation of the Clean Water Act were alleged in a United States Consent Decree of 1993 to have occurred in the course of unloading of pencil pitch. See discussion in response to Q-22, above. • On April 29, 1993, DEQ issued Notice of Non-Compliance WQ-NWR-93-166 to the Port for exceeding oil and grease limits under its NPDES 1300-J permit. • August 30, 1993, DEQ issued Notice of Non-compliance WQ-NWR-93-319 to the Port for exceeding oil & grease limits under its NPDES 1300-J permit. ., , • On May 15, 1996, the Port notified DEQ that stormwater samples exceeded TPH levels in NPDES Permit 1500-A. DEQ subsequently issued Notice of Non-Compliance #WQ-NWR-96-122 to the Port on December 18, 1996 for the TPH exceedances under the NPDES 1500-A permit. • On August 18, 1999, DEQ issued Notice of Non-Compliance #WQ-NWR-99-090 to the Port for TPH levels exceeding the limits under its NPDES 1500-A permit. The following citations, violations or deficiencies were issued to others for Terminal 4 activities: • On December 17 1976, DEQ issued a civil penalty AQ-PR-76-264 to the vessel M/V PETROL HAJIKYRIAKOS for emitting smoke in excess of DEQ standards • On March 24, 1971, Marperfecta CIA Navigation S.A., Panama received a Refuse Act Violation from the U.S. Coast Guard for oil pollution at Terminal 4, Berth 4. • On June 1, 1971, Outerocean Navigation Corporation received a Refuse Act Violation from the U.S. Coast Guard for oil pollution at Terminal 4, Pier 1, Berth 1. • On June 23, 1971, Amership Agency, Inc. received a Refuse Act Violation from the U.S. Coast Guard for grain pollution at Terminal 4, Pier 1, Berth 1. • On October 24, 1971, Great Eastern Shipping Co., Ltd. received a Refuse Act Violation from the U.S. Coast Guard for oil pollution at Terminal 4, Pier 1, Berth 2. • On November 9, 1971, Franz Hagen received a Refuse Act Violation from the U.S.	

	Coast Guard for bauxite pollution at Terminal 4, Pier 2, Berth 1. • On December 7, 1971, Bibby Lines, Ltd. received a Refuse Act Violation from the U.S. Coast Guard for oil pollution at Terminal 4, Pier 1, Berth 1.On December 15, 1971, Portland Stevedoring Co. received a Refuse Act Violation from the U.S. Coast Guard for bauxite pollution at Terminal 4, Pier 2, Berth 1. • On December 27, 1971, Jones Stevedoring Co. & Cargill Ink received a Refuse Act Violation from the U.S. Coast Guard for grain pollution at Terminal 4, Pier 1, Berth 2. • December 28, 1971, UPRR received a Refuse Act Violation 232-71 from the U.S. Coast Guard for oil pollution. • January 10, 1972, UPRR received a Refuse Act Violation from the U.S. Coast Guard for oil pollution. • On March 20, 1972, Cargill, Inc. received a Refuse Act Violation from the U.S. Coast Guard for grain pollution at Terminal 4, Pier 1, Berth 1. • On August 28 and 29, 1974, DEQ responded to complaints of dust emissions from the unloading of urea crystals at Pier 4. DEQ identified that the operations were in violation of several Oregon Administrative Rules (OAR). No further information was identified. • On May 5, 1984, the Port reported: "DEQ inspector noticed heavy dusting from unloading – contacted Myron Salo – verbal warning." for the Kinder Morgan soda ash operations. • In February 1987, the U.S. Coast Guard informed the Port of three deficiencies at the Terminal Flour Area. The deficiencies included replacing or repainting of "No Smoking" and "Designated Smoking Area" signage; existing electrical wiring installations were not being maintained in a safe condition; and fire alarm box had exposed wiring. • On December 30, 1988 (NWR-AQ/WR-88-179), March 21, 1989 and May 23, 1989, Notices of Non-Compliance were issued to Hall Buck for soda ash spills at Berth 411. • On April 25, 1989, 10 gallons of tallow was released from a ship line into Slip 1. The Coast Guard subsequently issued a Notice of Federal Interest in a Pollution Incident to Pacific Molasses for the release. • On May 23, 1989, DEQ issued a Class II Violation (NWR-AQ-89-67) to Hall-Buck for visible emissions in excess of 20% opacity for a period aggregating more than thirty	

	seconds in any one hour. • On February 18, 1995, BES issued a Warning Notice WN-1995-004 to Hall-Buck Marine for exceeding oil and grease limits under its Industrial Wastewater Discharge 400.027 permit. • On July 5, 1995, BES issued a Warning Notice WN-1995-018 to Hall-Buck Marine for exceeding oil and grease limits under its Industrial Wastewater Discharge 400.027 permit. • On January 2, 1996, DEQ issued Notice of Non-compliance WQ-NWR-95-169 to the Hall-Buck Marine for exceeding pH limits under its NPDES 1200-T permit. • On April 2, 2001, IRM received a Citation and Notification of Penalty for violation of 29 CFR 1917.26(f) and 29 CFR 1917.112(b)(1). • On December 11, 1996, UPRR received Notice of Non-Compliance NON-SP-96-010 from DEQ for its petroleum contamination seepage into the river. • During the first and second quarters of 2003, Kinder Morgan was in non-compliance due to discharges of total dissolved solids. • On October 10, 2003, Rogers Terminal and Shipping received a Fire Inspection Report from the City of Portland, Bureau of Fire, Rescue and Emergency Services for three violations: Bldg. #310 (remove unapproved locks from exit doors) and Bldg. #305 (remove unapproved locks from exit doors and provide bollard protection from vehicle damage for gas meter and piping). • On May 25, 2006, DEQ issued a Warning Letter Notice #WRN-NWR-WQ-2006-0090 to KMBT for violation of 340-045-0015(5)(c) and enforcement rule 340-012-0055(3)(e) violation of pH requirements by less than 0.5 pH.	
52. Provide a list of all local, state and federal environmental permits ever issued to the owner or operator on each Property (e.g., RCRA permits. NPDES permits, etc.). Please provide a copy of each federal and state permit, and the applications for each permit, ever issued to the owner or operator on each Property.	The following environmental permits and applications were identified in available records. These permits were issued to the Port or its tenants for the Terminal 4 property: **<u>Air Contaminant Discharge Permits</u>** • On December 17, 1984, DEQ issued Air Contaminant Discharge Permit Number 26-2909 to the Port for the Dravo unloader for the discharge of exhaust gases from the bulk commodity import and export plant at the Pier 4 (Berths 410/411). In 1988, DEQ	See agreements and contracts at Tab 1. See permit information included at Tab 7.

	transferred the Port's Air Contaminant Discharge Permit 26-2909 to Hall-Buck (KMBT). On April 4, 1989, DEQ issued Hall-Buck a modification to their Air Contaminant Discharge Permit No. 26-2909. On June 4, 2003, DEQ issued another modification to the Kinder Morgan Contaminant Discharge Permit No. 26-2909. Records indicate the permit was renewed in 2008. • In 2006, DEQ issued Cereal Foods an Air Contaminant Discharge Permit. Available information indicates the permit was renewed through 2009. **Storm Water** The following permits have been issued at the Terminal for discharges to the storm sewer: • On March 11, 1985, DEQ issued NPDES Waste Discharge Permit No. 100039 to the Port to discharge wash water to the river. The permit was transferred to Hall-Buck in 1988. • On February 17, 1993, DEQ issued an NPDES 1300-J Permit to the Port to discharge treated storm water runoff or treated groundwater. • On February 1, 1995, DEQ issued the Port NPDES 1500-J permit (#107640). The 1500-J permit replaced the prior 1300-J permit that was issued in 1993. • DEQ issued NPDES Municipal Separate Storm Sewer System (MS4) Discharge Permit No. 101314 to the Port on September 7, 1995 and renewed it on July 27, 2005 and January 30, 2011. Currently, Port stormwater discharges at Terminal 4 are permitted under the National Pollutant Discharge Elimination System (NPDES) Oregon DEQ Municipal Separate Storm Sewer System (MS4) Discharge Permit No. 101314 that was originally issued on September 5, 1995 and renewed on July 27, 2005 and January 30, 2011. On November 20, 1995, the Port's NPDES 1500-J permit was replaced with an NPDES 1500-A permit. • On May 15, 1997, UPRR applied to DEQ to transfer NPDES permit 446581 from the Port to UPRR. • On April 19, 1999, DEQ transferred NPDES 1500-A permit from UPRR to the Port. Records indicate the permit was maintained until its termination on November 7, 2005. • In May 2000, the Port submitted an application to DQ for renewal of its NPDES 1700-A permit.	See MS4 permit information in Tab 3 of the Port's 104(e) response for Terminal 5, submitted to EPA and dated May 16, 2008. See also supplemental records at Tab 9.

	• On November 8, 2000, DEQ issued an NPDES 1500-A permit to the Port to discharge water with petroleum hydrocarbons groundwater or surface water cleanup operations. • On April 3, 2001, DEQ issued the Port an NPDES 1200-CA permit effective through December 31, 2005 for stormwater erosion control. **Waste Water** The following is a summary of permitted discharges to the City of Portland sanitary sewer from Terminal 4: • On March 11, 1985, DEQ issued NPDES Waste Discharge Permit No. 100039 to the Port to discharge wash water to the river. This permit was transferred to Hall-Buck on July 22, 1988. • On October 2, 1987, the City of Portland issued a conditional permit for a one-time discharge of wastewater generated from pencil pitch unloading to the sanitary sewer. • On January 29, 1988, the Port and Hall-Buck requested permission from the City of Portland to conduct a one-time temporary hookup and discharge pencil pitch waste water into the sanitary sewer, which is connected to the POTW, in late March or early June 1988. • On April 15, 1988, the City of Portland granted approval to the Port to discharge waste water generated from cleanup of the Berth 412 loading dock to the sanitary sewer system, which flows to the POTW. The Port was allowed to discharge to the sanitary sewer four times between April 19 and August 1, 1988 and only after the waste water had been allowed to settle in containment for a minimum of 48 hours. • On September 8, 1997, the Port requested a Batch Discharge Permit for a one-time discharge of approximately 17,000 gallons of waste water generated from the dumper building for rail cars to be discharged to the sanitary sewer, which flows to the POTW. The water had collected in a pit over time and was to be removed in connection with demolition of the building. • On September 8, 1997, the City of Portland issued a one-time Industrial Waste water Batch Discharge Permit (Batch-1997-065) to the Port to discharge 17,000 gallons of rainwater and washdown water at Berth 412. The discharge occurred on September 17 and 18, 1997 and equaled 7,800 gallons.	

	• On September 10, 2002, the City issued Industrial Wastewater Batch Discharge permit #2002-035 for the discharge of approximately 400,000 to 500,000 gallons of water from dredging activities. • In November 2003, the City of Portland issued an Industrial Wastewater Batch Discharge Permit (2003-043) to the Port to discharge water from dredging activities to the City's sanitary sewer system, which flows to the POTW. • In 2004, the City of Portland issued an Industrial Wastewater Batch Discharge (Batch-2004-027) to the Port to discharge 33,000 gallons of water from dredging activities to the City's sanitary sewer system. • Between August 5 through 9, 2004, the Port discharged 33,690 gallons of wastewater from maintenance dredging operations to the sanitary sewer, which flows to the POTW. • In 2005, the City of Portland issued an Industrial Wastewater Batch Discharge (Batch-2005-028) to the Port to discharge 33,000 gallons of water from dredging activities to the City's sanitary sewer system. • On August 1, 2005, the Port discharged 33,000 gallons of wastewater from maintenance dredging operations to the sanitary sewer, which flows to the POTW. • On October 5, 2007, the Port discharged water under Batch Discharge Permit #2005-041 from stormwater system cleaning activities to the City's sanitary sewer system, which flows to the POTW. • In July 2008, the City issued a Batch Discharge Permit 2008-027 for discharging elutriate water from dredging activities to the sanitary sewer. The discharge occurred in October 2008 and totaled 262,830 gallons. • Between October 7 and November 24, 2008, the Port discharged 12,299 gallons of decant water from terminal sweeping activities to the sanitary sewer. • On February 26, 2009, the Port discharged 1,848 gallons of decant water from terminal sweeping activities to the sanitary sewer. **<u>Other Permits</u>** • On November 19, 1984, Greenway Permit #GP 24-84 was issued by the City of Portland, Bureau of Planning to the Port to construct a dry bulk handling plant. • On May 29, 1987, the City of Portland issued Conditional Use and Greenway Permit CU 29-87/GP 4-87 for livestock quarantine.	

	• On January 26, 1987, the City of Portland, Bureau of Planning issued Willamette Greenway Permit #23-86 to the Port to build a bulk plant. • On July 30, 1989, DEQ issued the Port Temporary UST permit #AHBHK for a diesel UST. • On June 15, 1990, the City of Portland issued Greenway Permit GP 4-90/ADJ 16-90 to the Port to construct a warehouse. • On September 18, 1992, the State of Oregon issued the Port permit #51547 to appropriate public waters for various Port properties, including Terminal 4. • On April 30, 1998, Greenway Permit LUR 98-00155 was issued by the City of Portland to remove a warehouse at Berth 401. • In 2005, the City of Portland Office of Sustainable Development issued Permit # C BLD/RES 04-093230-093231 to the Port for the demolition of Warehouses 1 and 2 at Pier 1. **In-Water Work** The following permits and applications were identified related to in-water construction and the permitted dredging and/or filling of the Terminal 4 property: • On April 9, 1973, the U.S. Army Corps of Engineers issued the Port Permit #001047 to remove an existing wharf and construct a new structure. • On July 11, 1975, DSL and the U.S. Army Corps of Engineers issued permit 071-OYA-001901 to dredge at Terminal 4. The permit allowed for 3,000 cubic yards to be removed each year for the life of the permit which expired February 29, 1981. • On July 28, 1975, the Port submitted an application to DSL for a permit for annual maintenance dredging at the marine terminals and the shipyard. DSL subsequently issued Material Removal Permit 2080 for the work. Available records indicate the permit was renewed annually from 1976 to 1983 and in 1992, 1994, 1995, 1997 (Revised) and 2000. The 1980 permit also provided for dredging to provide sufficient operating depth for the Multnomah County Sheriff's River Patrol Boat Station. • On August 4, 1975, U.S. Army Corps of Engineers issued the Port permit #071-OYA-1-001863 to construct a grain handling plant. • On August 3, 1981, the Port submitted an application to the Corps for annual	

	maintenance dredging at the marine terminals and the shipyard. The Corps subsequently issued 5-year Permit 071-OYA-1-004210 on April 1, 1982. The permit was revised on January 22, 1985 to accommodate a one-time dredging event at the shipyard. The Port requested renewal of the permit in 1987 and 1989. Records indicate the permit was also renewed in 1995. • On July 28, 1983, DSL issued Permit No. 3796 to for dredging and filling, riprap placement for storm drain replaced at Berth 408. • On September 2, 1986, the U.S. Army Corps of Engineers issued permit 071-OYA-2-004940 to the Port to place fill behind a retaining wall and place riprap along its face at Mile 4.25. The permit also provided for the relocation of a 6-inch storm drain and place 8 cubic yards of rock and filter material at the outfall. • In 1983, the Port submitted an application to the U.S. Army Corps of Engineers for annual maintenance dredging at marine Terminals 1, 2, 4, 5, and 6. The Corps subsequently issued Permit No. 071-OYA-2-005208 to the Port for the work in 1984. The Corps permit was modified in July 1984 and expired in July 1989. DSL issued Permit 3891 to the Port for the work in 1984. The DSL permit was renewed in 1985, 1986, 1988, 1990, 1991, 1993 and 1995 and expired in 1999. DSL Permit 3891 was used in coordination with several other Corps permits issued to the Port (i.e., 95-783 and 071-OYA-1-004210). • In 1991, the Port submitted an application to the Corps for a permit to conduct annual maintenance dredging of the marine terminals and the shipyard. The Corps subsequently issued 10-year Permit 071-OYA-1-008760 for the work on September 16, 1991. The permit expired in 2001. • On September 16, 1993, the U.S. Army Corps of Engineers issued a permit under the National Permit 33 to replace fourteen timber piles at Terminal 4. • The following applications and permits were identified in connection with the 1994 sediment remediation work in Slip 3: o On June 30, 1994, the Port submitted a joint application to the Corps and DSL (Application No. 94-00549) for the work. o On August 18, 1994, the U.S. Army Corps of Engineers issued a permit for the Port to dredge 60,000 cubic yards of material in Slip 3 for sediment remediation. o In 1994, Oregon Department of State Lands issued a permit (RF-8820) for the	

	Port to dredge 60,000 cubic yards of material in Slip 3 for sediment remediation in conjunction with the aforementioned U.S. Army Corps of Engineers approved following Application No. 94-00549. • On February 28, 1996, the U.S. Army Corps of Engineers issued the Port permit #96-00008 to dismantle the warehouse and pier, and remove pilings below ordinary high water at Pier 2. • October 19, 1998, the U.S. Army Corps of Engineers issued the Port Permit #97-632 for the rehabilitation and/or dismantling of Berths 401, 403, 404, and 405. • August 29, 1997, the U.S. Army Corps of Engineers issued permit RF-14022 to the Port to for removal and replacement of material at Willamette River Mile 4.3 for river bank protection. The permit was issued in connection with rehabilitation and dismantling work taking place at Berths 401, 403, 404, and 405. • In 1998, the U.S. Army Corps of Engineers issued the Port Permit #97-00767 for the removal of Berth 412 and the bulk outloader. • On May 22, 1998, DSL issued the Port the Removal/Fill permit SP-14998 for removal and placement of fill for bank stabilization. • In 2001, the U.S. Army Corps of Engineers issued the Port permit #2000-00474 for the replacement of fender piles. • On July 6, 2001, the U.S. Army Corp of Engineers issued the Port permit 2001-00648 for Berth 408 piling repair. • On July 22, 2002, DSL issued removal fill permit #25315-RP for maintenance dredging at Berths 410 and 411. The U.S. Army Corps of Engineers issued Permit #2000-00984 to the Port for the work. • On August 30, 2004, DSL issued permit 32474-RF and the U.S. Army Corps issued Permit # 2000400386 to the Port for placement of steel sheet piling and removal of up to 100 cubic yards of rock and organics. • In 2004, the Port completed a DEQ-ordered project to excavate and backfill the bank at the head of Slip 3 at Terminal 4. Permits associated with this work include: o DSL Permit Waiver No. 33069-PW o U.S. Army Corp of Engineers Nationwide Permit 38 (Corps No. 200400521) The following permits issued to others for Terminal 4 were contained in the Port's records:	

	• On June 4, 1973, the Port of Portland issued the City of Portland Fire Bureau permit 73-26 authorizing maintenance dredging near river mile 4.3. The Port of Portland permit corresponds to the U.S. Army Corps of Engineers issued permit 071-OYA-1-001237. • On July 1973 Cargill was issued a DEQ six-month temporary air contaminate discharge permit for the grain elevator. • On November 14, 1975, the Port issued a permit to the City of Portland to install a 1,000-gallon diesel fuel storage tank above the station houseboat for the Fireboat No. 3. • September 28, 1987, the City of Portland issued an Industrial Waste Discharge Permit 400-021 to Lee Babcock to discharge waste from the sheep quarantine area into the City's sanitary sewer. • On September 1, 1991, BES issued Hall-Buck Marine a Municipal Pretreatment Program Waste Discharge Permit (#400-027). • On October 9, 1992, DEQ issued Hall-Buck Marine an NPDES 1200-T Storm Water Discharge Permit. • On May 12, 1992, DEQ issued Jones Oregon Stevedoring Company NPDES 1200-T permit #106744 for the T4 Mechanics Shop. • On June 27, 1995, DEQ issued Transmarine Navigation Corporation a special permit for the discharge of 15,750 gallons of tank holding water from the vessel SS BROOKS RANGE into the Willamette River. The special permit indicated Terminal 4 as the location for discharge. No further details were provided. • On December 3, 1998, DEQ issued IRM an NPDES 1200-Z permit effective through June 30, 2002. • In 1997, Kinder Morgan held an NPDES 1200-Z permit. No further details were identified. • On August 1, 2000, the City of Portland Bureau of Environmental Services issued KMBT Wastewater Discharge Permit No. 400.027 for its sanitary discharge. • In 2006, DEQ issued KMBT individual NPDES permit No. 102446. • In 2006, DEQ issued Cereal Food Processors, Inc. an Air Contaminant Discharge Permit. Available information indicates the permit was renewed through 2009. • IRM previously held an NPDES 1200-Z permit for its leasehold but filed a Notice of Termination on November 26, 2007 with DEQ based on lack of exposure to storm	

	drains. The termination is listed under DEQ File No. 109008/B. The permits, applications and letters modifying permits and applications summarized above are included in Tab 7. Additional permits and applications for work adjacent to the Terminal 4 property are also included in Tab 7.	
53. Did the owner or operator ever file a Hazardous Waste Activity Notification under the RCRA? If so, provide a copy of such notification.	Yes. Hazardous waste notifications are contained in the records at Tab 7.	See other environmental records at Tab 7.
54. Did the owner or operator's facility on each Property ever have "interim status" under the RCRA? If so, and the facility does not currently have interim status; describe the circumstances under which the facility lost interim status.	Not to the Port's knowledge.	
55. Provide all RCRA Identification Numbers issued to Respondent by EPA or a state for Respondent's operations.	The Port has been assigned the following DEQ IDs for hazardous waste: • ORD 980983092 in 1993 and 1994 • ORD 981771546 in 1993 and 1994 • ORD 961771546 1991 through 2008	
56. Identify all federal offices to which Respondent has sent or filed hazardous substance or hazardous waste information. State the years during which such information was sent/filed.	US Coast Guard and US EPA. It is possible that information has historically been sent to other agencies, but this information was not identified in Port files.	

57. Identify all state offices to which Respondent has sent or filed hazardous substance or hazardous waste information. State the years during which such information was sent/filed.	In available records, the Port identified the following submittals to state offices: • Oregon State Fire Marshal – Salem Oregon office (1992, 1993 and 1995 to present) • Oregon DEQ – Portland Oregon offices (1986, 1988 and1991 to present) specifically: o Accounting Section o Toxics Use/Waste Reduction Assistance Program o Hazardous & Solid Waste Division	
58. List all federal and state environmental laws and regulations under which Respondent has reported federal or state governments, including but not limited to: Toxic Substances Control Act, 15 U.S.C. Sections 2601 et seq., (TSCA); Emergency Planning and Community Right-to-Know Act, 42 U.S.C. Sections 1101 et seq., (EPCRA); and the Clean Water Act (the Water Pollution Prevention and Control Act), 33 U.S.C. Sections 1251 et seq., Oregon Hazardous Substance Remedial Action Law, ORS 465.315, Oregon Water Quality law, ORS Chapter 468(b), Oregon Hazardous Waste and Hazardous Materials law, ORS Chapters 465 and 466, or Oregon Solid Waste law, ORS Chapter 459. Provide copies of each report made, or if only oral reporting was required, identify the federal and state offices to which such report was made.	**Federal** • Toxic Substances Control Act (TSCA) • Resource Conservation and Recovery Act, SARA 312 (State Fire Marshal) • Clean Air Act **State** • NPDES DEQ Municipal Separate Storm Sewer System (MS4) Discharge Permit No. 101314 and general NPDES permits (1300-J, 1500-J, and 1500-A). • Hazardous Substance Remedial Action Rules, Division 122 (OAR 340-122-010 through 0590) • Oregon Hazardous Waste and Hazardous Materials law, ORS Chapters 465 and 466, or Oregon Solid Waste law, ORS Chapter 459 Air contaminant discharge permits administered by DEQ	See site investigation records at Tab 6. See other environmental records at Tab 7. See supplemental records at Tab 9.
59. Provide a copy of any registrations, notifications, inspections or reports required by the Toxic Substances Control Act, 15 USC § 2601 et seq., or state law, to be maintained or submitted to any government agency, including fire marshal(s), relating to PCB(s) or PCB(s) containing materials or liquids on any Property identified in response to Question 4.	See records at Tab 7.	See other environmental records at Tab 7.

60. Has Respondent or Respondent's contractors, lessees, tenants, or agents ever contacted, provided notice to, or made a report to the Oregon Department of State Lands ("DSL") or any other state agency concerning an incident, accident, spill, release, or other event involving Respondent's leased state aquatic lands? If so, describe each incident, accident, spill, release, or other event and provide copies of all communications between Respondent or its agents and DSL or the other state agency and all documents that were exchanged between Respondent, its agents and DSL or other state agency.	Not to the Port's knowledge.	
61. Describe all notice or reporting requirements to DSL that you had under an aquatic lands lease or state law or regulation regarding incidents affecting, or activities or operations occurring on leased aquatic lands. Include the nature of the matter required to be reported and the office or official to whom the notice or report went to. Provide copies of all such notices or reports.	Not applicable.	

Section 6.0 - Releases and Remediation		
62. Identify all leaks, spills, or releases into the environment of any waste, including petroleum, hazardous substances, pollutants, or contaminants, that have occurred at or from each Property, which includes any aquatic lands owned or leased by Respondent. In addition, identify and provide copies of any document regarding: a. when such releases occurred; b. how the releases occurred (e.g. when the substances were being delivered by a vendor, transported or transferred (to or from any tanks, drums, barrels, or recovery units). and treated); c. the amount of each hazardous substances, pollutants, or contaminants so released; d. where such releases occurred; e. any and all activities undertaken in response to each such release or threatened release, including the notification of any agencies or governmental units about the release; f. any and all investigations of the circumstances, nature, extent or location of each release or threatened release including, the results of any soil, water (ground and surface), or air testing undertaken; g. all persons with information relating to these releases; and h. list all local, state, or federal departments or agencies notified of the release, if applicable; i. include a description of a sulfuric acid spill in May 1989 recorded by the Oregon State Fire Marshall's Office; and j. Specifically provide all information you have regarding spills, releases or waste disposal practices of Cargill, Inc. on any of your Properties.	The following leaks, spills or releases were identified at the Terminal 4 property: i. In 1970, a spill resulted from a leaking valve seal on the UPRR pipeline. Standard Oil recovered about 200 gallons of diesel fuel from an overflowing manhole. ii. Petroleum releases of oil to the river in and around Slip 3 from the UPRR pipeline and related operations and the Quaker State motor oil pipeline were documented as early as 1970 and subsequent years, continuing into the early 2000s. See responses to Questions 11, 22, 51 and 71. iii. On August 28 and 29, 1974, DEQ responded to complaints of dust emissions from the unloading of urea crystals at Pier 4. DEQ identified that the operations were in violation of several Oregon Administrative Rules (OAR). No further information was identified. iv. On September 12, 1979, DEQ responded to complaints of dust emissions from the unloading of ships at Terminal 4. No further information was identified. v. On July 11, 1981, a spill resulted from leaking dimethoate insecticide barrels that were stored outside House 4. The Portland Fire Department and Hazardous Materials Response team were contacted and Environmental Emergency Services was brought in to clean up the spill. vi. On July 22, 1982, a hydraulic leak from the Brady-Hamilton Stevedore lift #30002 resulted in a small spill. A dam was placed around the pooled material and the material was absorbed with Quick Sorb. vii. Around 1984, a 300 to 400 gallon leak of liquid fertilizer occurred on the PM-Ag leasehold, all but 5 to 10 gallons was recovered. viii. On August 4, 1983, while loading the M/V GREAT OCEAN, a UPRR switch crew tipped over a railcar and caused approximately 12 tons of soda ash to spill from a car being discharged at the hopper. Brady-Hamilton cleaned up the spill. ix. On January 16 and 24, 1985 a release of ammonium nitrate solution fertilizer was released from Tanks 10 and 7, respectively, on the PM-Ag leasehold. Approximately 4.66 tons was released during the two incidences. There was no	See other environmental records at Tab 7. See supplemental records at Tab 9.

	indication that these materials reached the river. x. On May 19, 1988, during a DEQ inspection dust emissions were observed coming from the bulk outloader. xi. August 4, 1988 a release of soda ash occurred during unloading by Hall-Buck Marine. No additional information was available. xii. On August 6 and 17, 1988, severe dust was observed from the outloader. No further details were provided. xiii. On September 27, 1988 a sewage spill occurred at Terminal 4. No additional information was available. xiv. On June 7, 1989, Jones Oregon Stevedoring Company was observed dumping "oily" material outside the gearlocker at Terminal 4. The material was sampled and analyzed. Based on the lab results, the material was identified as some type of degreasing solution ("safety solvent"). xv. On February 13, 1990, evidence of a surface spill at UST T-14 was observed during a Port Annual Environmental Inspection. T4-14 was decommissioned by HAI in 1991 and DEQ subsequently conferred NFA status for the former UST in 1996. See response to Question 13(j). xvi. On September 26, 1991, a leaking drum was reported at the Terminal 4 warehouse. HAI was dispatched to the site to evaluation and secure cleanup. No additional information was available. xvii. In October 1991, a spillage of oil was observed at Matson Warehouse #2 during a routine inspection. Analytical results from samples of the oil revealed no detected levels of PCBs. No further details were provided. xviii. In 1992, material was pumped out of the sewer that contained toluene (200 ppm) and xylene (66 ppm). The origin of the material was not confirmed, but based on the limited connections to the sewer lift station, was considered to likely be attributable to Terminal Flour Mills. xix. On August 11, 1992, a driver for Lloyd Johnson was coming from the scale and broke a fuel line while trying to turn causing 1 to 1 ½ gallons of diesel to spill onto the asphalt. The spill was covered with sawdust. xx. On November 23, 1992, a Port plumber was performing routine monthly inspection of sewer lift station on property leased to Cereal Foods. The plumber	

		noticed a petroleum/organic odor. An industrial hygienist was called to the scene, sampled the atmosphere using an explosimeter and an oxygen meter. The sewer lift station was pressure washed and material was pumped out and stored in a 55 gallon drum. The material was sampled and toluene and xylene were detected.	
	xxi.	In June 1993, a release occurred from engine blocks stored on the Schnitzer property adjacent to the northern Terminal 4 property boundary. The engine blocks leaked oil onto Terminal 4 property. An investigation of an area of stained soil revealed oil, PCBs and metals.	
	xxii.	On October 6, 1995, a release of fuel occurred from a vehicle at Terminal 4. The fuel released was absorbed by diatomaceous earth. Foss Environmental assessed the cleanup and placed filter fabric in near-by drains as a preventative measure.	
	xxiii.	On October 19, 1995, a release was discovered from UST No. T4-16. The Port contracted Geraghty & Miller to oversee to removal of the tank. The 6,000 gallon diesel tank removal was completed by December 6, 1995.	
	xxiv.	On July 30, 1996, during the removal of a 4,000 gallon UST at the Gearlocker a release associated with the fuel delivery island was discovered.	
	xxv.	On December 6, 1997, fluid leaking from Marine Maintenance Paving equipment was observed at Warehouse #7. Absorbent pads were used to clean up the release.	
	xxvi.	On April 7, 1998, 10 tons of lignin foam (a non-hazardous, wood-based product) was spilled at the IRM plant. Approximately 8 tons of the material was recovered.	
	xxvii.	On April 30, 2001, DEQ noted a “petroleum sheen” was visible at the head of Slip 1.	
	xxviii.	In 2004, IRM notified the Port of a cargo pipeline fuel leak. The product leaked was dust control spray. No further details regarding the leak were identified.	
	xxix.	On February 19, 2002, a 55-gallon drum of GE Silicone TWR255 was punctured by a forklift. A containment kit was used to absorb liquid released from the drum. No further details identified.	
	xxx.	On March 6, 2004, less than 20 gallons of hydraulic fluid was released in the derailment of UPRR locomotive at Terminal 4	
	xxxi.	On August 23, 2006, approximately 9 gallons of hydraulic fluid was released to the ground from a ruptured hydraulic line in H&H Construction (H&H) ballast	

	tamper machine during the Railyard Redevelopment Project. H&H began recovering oil from machine and rail and removing oily ballast to a depth of 6 inches below ground surface. xxxii. On January 31, 2007, Algirdas Contracting, Inc. observed an approximate 3 gallon hydraulic fluid release from their equipment during the Hitachi Crane demolition at Berth 408. Algirdas used contractor pads, Napa clay absorbent, and booms to contain and clean-up the spill. No further action was required. xxxiii. On February 28, 2007, approximately 5 to 10 gallons of diesel fuel was spilled by a UPRR railcar at the first switch on Terminal 4 property. The appropriate local agencies were notified and cleanup of surficial soils was conducted by UPRR. Observations of pencil pitch dust at the Terminal and reports of releases of pencil pitch to the air, onto the Terminal or into the water are summarized on Table 5. Releases of PCB materials are included in the response to Question 47. Additional information on leaks, spills and releases in the Slip 3 area is contained in the litigation documents in Port v. UPRR, Case # 98-886-PA, Or. D. Ct., including but not limited to the court's March 2001 Opinion, incorporating its November 1999 Order and portions of Plaintiff's Findings of Facts and Conclusions of Law. These records have been included in Tab 9. See also response to Questions 11, 22, and 63 to the extent they reflect leaks, spills and releases.	
63. Was there ever a spill, leak, release or discharge of waste, including petroleum, or hazardous substances, pollutant or contaminant into any subsurface disposal system or floor drain inside or under a building on the Property? If the answer to the preceding question is anything but an unqualified "no", identify: a. where the disposal system or floor drains were located; b. when the disposal system or floor drains were installed;	As indicated in response to previous questions (Question 4, for example), since acquiring Terminal 4, the Port has acted primarily as the landlord for tenants leasing buildings and yard space. As a result, the Port has little information on day-to-day activities of the tenants within their leased premises including whether there were spills or releases etc. into subsurface disposal systems or floor drains. What information the Port does have is provided below and in response to Question 11. On November 23, 1992, during the course of performing a routine monthly inspection of the	

c. whether the disposal system or floor drains were connected to pipes; d. where such pipes were located and emptied; e. when such pipes were installed; f. how and when such pipes were replaced, or repaired; and g. whether such pipes ever leaked or in any way released such waste or hazardous substances into the environment.	sewer lift station on the Cereal Foods leasehold, a Port plumber noticed a petroleum/organic odor. The sewer lift station was pressure washed and the material was pumped into a 55-gallon drum. The material was subsequently sampled and toluene and xylene were detected. Two subsurface soil samples collected during the Slip 1 RI in the vicinity of the Cargill leasehold near the four cesspools (from borings SB-22 and SB-23) contained TPH above the MRLs. The TPH in these borings were primarily residual-range hydrocarbons (e.g., oil or other higher carbon-range hydrocarbons) and ranged from 2,800 mg/kg in the 13-foot sample from SB-23 to 16,000 mg/kg in the 17-foot sample from SB-22. A 13-foot sample from SB-22 did not contain TPH above the MRLs. Elevated PAHs were detected in the 17-foot sample from SB-22, located in the former cesspool area in the north-central part of OU1. Concentrations of five of the PAHs exceeded industrial PRGs. Subsurface soil samples collected in adjacent borings or at shallower depths contained significantly lower PAH concentrations and only benzo(a)pyrene exceeded the industrial PRG in one of the adjacent samples. PAH concentrations were below the PRGs in the other nearby soil samples and demonstrate that the PAH-impacted soil in the vicinity of the former cesspools is limited in extent and below a depth of about 13 feet. In the 12.5- to 14-foot sample from SB-23 (located in the four cesspools area), 4,4'-DDE and 4,4'-DDD concentrations (54 and 35 µg/kg, respectively) were detected; these were below the industrial PRG but slightly exceed the terrestrial SLVs.	
64. Has any contaminated soil ever been excavated or removed from the Property? Unless the answer to the preceding question is anything besides an unequivocal "no", identify and provide copies of any documents regarding: a. amount of soil excavated; b. location of excavation presented on a map or aerial photograph; c. manner and place of disposal and/or storage of excavated soil; d. dates of soil excavation; e. identity of persons who excavated or removed the soil, if other than a contractor for Respondent;	We are assuming for the purposes of the response to this question, that contaminated soil does not include sediment. The following investigations were either reviewed during the Remedial Investigation (RI) of Terminal 4 for Slip 1 in and Slip 3 in 2000, or are included in ongoing investigations at Terminal 4. The work plans and RI reports may also reference additional soil removals that have occurred. **<u>PCB Cleanup at Berth 411 Electrical Substation</u>** a. 2.5 cubic yards b. Trench in Area III of the cleanup area c. Unknown d. Fall 1990	See site investigation records at Tab 6. See other environmental records at Tab 7.

f. reason for soil excavation; g. whether the excavation or removed soil contained hazardous substances, pollutants or contaminants, including petroleum, what constituents the soil contained, and why the soil contained such constituents; h. all analyses or tests and results of analyses of the soil that was removed from the Property; i. all analyses or tests and results of analyses of the excavated area after the soil was removed from the Property; and all persons, including contractors, with information about (a) through (i) of this request.	e. HAI and Chempro Environmental Services, Inc. f. PCB contamination g. PCB h. See Tab 7 i. See Tab 7 j. Port, HAI, and Chempro Environmental **<u>Waste Oil Pipe Area at Former OTC Gearlocker Building</u>** a. 5 cubic yards b. Former waste oil pipe area at UST-29 also referred to as T4-14 at Oregon Terminal Company's maintenance plant. c. Soil was transported by to the Hillsboro Landfill on July 23, 1991 d. April 1991 e. HAI and PEMCO f. Petroleum contamination g. Verification sampling for TPH indicated that petroleum impacted soil remains in place immediately adjacent to and possibly below the building in the former waste oil pipe area. h. See Tab 7 i. See Tab 7 j. HAI, Century West, Port, DEQ, Petroleum Equipment Maintenance Company (PEMCO) **<u>UST Decommissioning and Cleanup at Gearlocker</u>** a. 5.5 tons of soil b. Pump islands near Gearlocker c. Removed and transported to TPS Technologies in Portland, Oregon d. July 30, 1996 e. GeoEngineers, C. Wark Trucking, Inc., and TPS Technologies f. Diesel and oil range hydrocarbons g. Oil range hydrocarbons detected at concentrations of 790 mg/kg h. See tab 6	

	i. See tab 6 j. GeoEngineers, Port **Hydraulic Oil Contaminated Soil at Cargill** a. 68 cubic yards in 2002 and 51 cubic yards on November 19, 2003 b. Storage shed and C-11 Hydraulic Room c. Removed and transported to TPS Technologies in Tacoma, Washington for disposal. d. 2002 and November 18 and 19, 2003 e. MACTEC and FOSS Environmental Services f. Hydraulic oil-contaminated soil g. Soil samples indicated low levels of PNAs and predominance of lube oil range petroleum hydrocarbon compounds. h. See Tab 7 i. See Tab 7 j. MACTEC, Cargill **Bank Excavation and Backfill Remedial Area** a. 4,400 cubic yards b. The head of Slip 3 bank c. The contaminated soil was disposed of at Coffin Butte Landfill d. October 4 through December 3, 2004 e. Tapani Underground, Inc. f. Petroleum contaminated soil g. Petroleum h. See Tab 7 i. Testing was not completed on the excavated soil j. Tapani Underground, Inc., Hart Crowser, Ash Creek Associates **Pencil Pitch Limited Soil Removal** a. 50 cubic yards b. See Figure 2 from Pencil Pitch Investigation Work Plan from BBL/Ash Creek Assoc./Newfields dated September 28, 2005.	

	c. In November 2003, the soil was disposed of at Hillsboro landfill. d. November 2003 e. T4 ASA construction contractor f. Pencil pitch was observed in the soil. g. Confirmation samples were not collected because the Port understood that additional work would be required by the DEQ pursuant to VCP Agreement. h. See Tab 7 i. See Tab 7 j. Port, Hart Crowser **<u>Pier 2 Rail Project – PAH-Impacted Soil and Ballast</u>** a. 2,692 tons b. Pier 2 Rail Yard c. The material was disposed at the Hillsboro Landfill in Hillsboro, Oregon d. December 2006 e. Eagle-Elsner, Inc. f. PAH-impacted soil and ballast g. PAHs h. See Tab 7 i. See Tab 7 j. Port, Eagle-Elsner **<u>Hydraulic Oil Stained Soil at Grain Tanks</u>** a. One 55-gallon drum b. West of the grain tanks at the former Cargill leasehold (see Figure 2 of the March 2009 Terminal 4 Grain Tanks Demolition Report) c. Soil, concrete, and gravel were placed in a 55 gallon drum and the drum was disposed of at the Hillsboro Landfill in Hillsboro, Oregon. The drum was transported by Waste Express. d. August 5, 2008 e. Elder Demolition, Inc. f. During disconnection of hydraulic lines associated with a dismantled conveyor system,	

	residual fluid dripped onto the gravel and surface soil below the connections. g. The soil contained gasoline, diesel and heavy oil range hydrocarbons, arsenic, barium, cadmium, chromium, lead, selenium, mercury, and the PCB Aroclor 1254. h. See Tab 7 i. See Tab 7 j. Elder Demolition, Inc., Ash Creek Associates, and the Port **T4 Removal Action Phase I – Wheeler Bay Bank Stabilization** a. 1,200 tons of material (vegetation/soil/debris) b. Wheeler Bay c. Wasco County Landfill d. August 14 to September 19, 2008 e. Envirocon f. Stabilization and capping of the Wheeler Bay bank to minimize contaminant migration to the river g. PAHs were detected in the samples at concentrations that exceeded the preliminary screening levels. At two locations, 4,4-DDT exceeded the preliminary screening levels for terrestrial ecological receptors. In the composite samples, metals (arsenic, cadmium, copper, lead, zinc) were detected above regional background concentrations and the preliminary screening levels. Bis(2-ethylhexyl)phthalate was detected in one sample but the concentration was below the preliminary screening levels. h. See Tab 7 i. See Tab 7 j. Port, Ash Creek Associates, Anchor Environmental, Parametrix, EPA, and Envirocon **Slip Bank Source Control and Hot Spot Removal** a. 182 tons of soil b. Slip 3 c. Hillsboro Landfill d. October 28 to October 30, 2009 e. Phoinix Corporation f. Removal of Hot Spot and Slip Bank source control pursuant to a Consent Judgment	

	between DEQ and the Port. g. See RI Report, Terminal 4 Slip 3 Upland h. Waste determination samples were analyzed for PAHs by EPA Method 8270M-SIM. i. Confirmation soil samples were analyzed for PAHs by EPA Method 8270M-SIM. j. Port, Ash Creek Associates, DEQ, Phoinix Corporation	
65. Have you ever tested the groundwater under your Property? If so, please provide copies of all data, analysis, and reports generated from such testing.	The groundwater under the property was investigated during environmental investigations at Terminal 4. In the Portland Harbor and Port Facility Groundwater Assessment (Hart Crowser and Bridgewater Group, Inc., May 2003), the following groundwater investigations were summarized, see Tab 7 for reports: • January 1994 – Century West Remedial Investigation Slip 3 Oil Seep Terminal 4. • 1993-1996 - Century West Groundwater Monitoring • 1997-Kennedy/Jenks Subsurface Investigation at the Former Quaker State oil canning plant. • March 1997-Pacific Environmental Group (PEG) T4 Slip 3 Subsurface Investigation • June 2000-Hart Crowser Remedial Investigation for Slip 3 In addition to the above investigations, the following ground water investigation reports are in included in Tabs 6 and 7: • 1999-present Hart Crowser Groundwater Monitoring Reports for Slip 3 • January 2003-HAI conducted an investigation of groundwater seeps at the east end of Slip 1 • June 2004-Hart Crowser Product Removal and Groundwater Monitoring Report for Slip 3 • August 2007-Ash Creek Associates, Inc. (ACA).-Remedial Investigation Report for Terminal 4 Slip 1 Upland Area • 2004-Present-ACA Quarterly Groundwater Monitoring Reports for Slip 3 Also see response to Question 71.	See site investigation records at Tab 6. See other environmental records at Tab 7. See supplemental records at Tab 9.

	See also response to Question 13 (h) for monitoring well information.	
66. Have you treated, pumped, or taken any kind of response action on groundwater under your Property? Unless the answer to the preceding question is anything besides an unequivocal "no", identify and provide copies of any documents regarding: a. reason for groundwater action; b. whether the groundwater contained hazardous substances, pollutants or contaminants, including petroleum, what constituents the groundwater contained, and why the groundwater contained such constituents; c. all analyses or tests and results of analyses of the groundwater; d. if the groundwater action has been completed, describe the basis for ending the groundwater action; and e. all persons, including contractors, with information about (a) through (c) of this request.	A groundwater cleanup action has been in progress at Terminal 4 Slip 3 from 1993 to the present, summarized as follows. a. As a result of releases from the UPRR petroleum pipeline, separate-phase petroleum hydrocarbons were found floating on groundwater adjacent to Slip 3. A groundwater treatment system was installed in 1993 to prevent migration of petroleum to surface water and to remove petroleum hydrocarbons. The system was in place until 2002, by which time, little or no sheen was observed in Slip 3. Based on the system's effectiveness on remediating the petroleum seep, the interim action system was disabled. A final remedy was implemented in 2004 consisting of installation of a permeable reactive wall and removal of separate phase hydrocarbons from monitoring wells inland of the wall. b. Separate-phase petroleum hydrocarbons were floating on groundwater. Groundwater was tested and found to contain TPH and PAHs. c. See site investigation records at Tab 6. d. Groundwater action is ongoing, consisting of recovery of separate-phase hydrocarbons. e. Century West Engineering (1993 to 1996); Hart Crowser (1996 to 2004); and Ash Creek Associates (2004 to 2009)	See site investigation records at Tab 6. See other environmental records at Tab 7.
67. Was there ever a spill, leak, release or discharge of a hazardous substance, waste, or material into the Willamette River from any equipment, structure, or activity occurring on, over, or adjacent to the river? If the answer to the preceding question is anything but an unqualified "no", identify and provide copies of any documents regarding: a. the nature of the hazardous substance, waste, or material spilled, leaked, released or discharged; b. the dates of each such occurrence;	See response to Question 22 above.	

c. the amount and location of such release; d. were sheens on the river created by the release; e. was there ever a need to remove or dredge any solid waste, bulk product, or other material from the river as a result of the release? If so, please provide information and description of when such removal/dredging occurred, why, and where the removed/dredged materials were disposed.		
68. For any releases or threatened releases of PCB(s), identify the date, quantity, location and type of PCB(s) or PCB(s) containing materials or liquids, and the nature of any response to or cleanup of the release.	See response to Question 47.	
69. For any releases or threatened releases of PCB(s) and/or PCB(s) containing materials or liquids, identify and provide copies of any documents regarding the quantity and type of waste generated as a result of the release or threatened release, the disposition of the waste, provide any reports or records relating to the release or threatened release, the response or cleanup and any records relating to any enforcement proceeding relating to the release or threatened release.	See response to Question 47. See Tab 7 for PCB-containing transformer disposition records.	See other environmental records at Tab 7.

Section 7.0 - Property Investigations		
70. Provide information and documentation concerning all inspections, evaluations, safety audits, correspondence and any other documents associated with the conditions, practices, and/or procedures at the Property concerning insurance issues or insurance coverage matters.	The Port has been having communications with its insurers regarding defense and settlement of third party claims associated with the Portland Harbor Superfund Site. The communications between the Port and its insurers are confidential communications in an ongoing insurance settlement process among the Port and its insurers and their respective legal counsel in respect of which the Port and its insurers have common interests adverse to third party governmental agencies and other potentially responsible parties in the Harbor (including associated upland sites) where there is actual or reasonable likelihood of future litigation. Such communications are attorney-client and work product privileged confidential communications under the common interest doctrine. As relates to the Terminal 4 property, the factual information underpinning these confidential communications has, nonetheless, been disclosed in the documents and responses provided to these questions.	
71. Describe the purpose for, the date of initiation and completion, and the results of any investigations of soil, water (ground or surface), sediment, geology, and hydrology or air quality on or about each Property, Provide copies of all data, reports, and other documents that were generated by you or a consultant, or a federal or state regulatory agency related to the investigations that are described.	The Port is a signatory to an Administrative Order on Consent for the Portland Harbor RI/FS. In addition, the Port entered into an Administrative Order on Consent for Removal Action with EPA in 2003 to address a specific in-water area off Terminal 4. These investigations are being conducted with EPA oversight and to the extent there are materials responsive to this question already in EPA's possession, they are not summarized below. **<u>Geotechnical Investigations</u>** **1919 Borings** Six borings were completed in February of 1919 at the grain elevator. The borings ranged in depth between 91 and 185 feet bgs. The boring logs indicate the site is underlain by approximately 20 feet of sand fill. Below the fill, the soils are interbedded clay, silt and sand. The purpose of the borings is not reflected in the logs; however, given the timeframe, it is likely they were installed in relation to the development of the grain operation. **1927 to 1930 Borings** Seven borings were completed between 1927 and 1930 at the proposed storage bins site. The borings ranged in depth between 163 and 175 feet bgs. The boring logs indicate the site is underlain by approximately 15 feet of sand fill. Below the fill, the soils	See other environmental records at Tab 7. See supplemental records at Tab 9.

	are interbedded clay, silt and sand. **1955 to 1958 Soil Borings** Six test borings were completed between 1955 and 1958 for pile driving at Terminal 4. The borings ranged in depth between 116 and 161 feet bgs. The boring logs indicate the site is underlain by sand fill that ranged from 5 to 20 feet bgs. Below the fill, the soils are interbedded clay, silt and sand. **1953 Foundation Investigation of Proposed Car Tipper** A geotechnical investigation was conducted to evaluate subsurface conditions for the proposed car tripper. Two soil borings with depths of 125 feet below the ground surface were completed. The borings indicated that the site is underlain by 18 feet of medium sand fill. Below the fill, the soils were reported as weak, compressible silty loam. Based on the results of the subsurface investigation the recommended foundation was either a mat supported or pile-supported mat. **1957 Foundation Investigation for Proposed Grain Storage Tanks** A geotechnical investigation was conducted to evaluate subsurface conditions for the proposed grain storage bins. Three soil borings were completed at depths ranging from 61.5 to 83 feet bgs. The boring logs indicate that the site is underlain by approximately 20 feet of medium sand fill. Below the fill, the soils were reported as weak, compressible silt and clay. Based on the results of the results of the investigation, the recommended foundation was a mat foundation. **1959 Investigation of the Failure of the Steel Sheetpiling** A geotechnical investigation was conducted to evaluate the cause of failure of the sheet piling bulkhead at Pier 4 and ascertain soil properties. Three test brings were advanced and soil samples were collected to test shear strength and internal friction. Samples indicated either a fine silty sand with a relatively weak shear strength or a more dense material with a higher angle of internal friction. Based on the results of the investigation, the recommended further action was to remove the sheet piling and increase the slope under the dock by adding material such as quarried rock. **1962 Subsurface Investigation Slip 1 Terminal 4** In August and September 1962, ten borings were completed to classify the subsurface materials at the site. All samples were analyzed for water content. In addition, plasticity and shear strength was evaluated in representative	

	samples. In general the soils consisted of fine sand with silt lenses. Underlying the sand, a deposit of black, dense, medium sand was observed. **1963 Slope Indicator Measurements, Terminal 4 Pier 4** Seven slope indicator wells were installed beneath Pier 4 in 1960 to detect movements in the slope. In general the soils at the site consisted of loose, medium to fine sand with silt lenses fill. Underlying the fill, loose sands, silts, silty sands and clayey silts were observed. Based on the results of the study, vertical and horizontal movements were detected; however, the movements were not considered unusual given the data, foundation conditions, and sequence of construction. **1970 Foundation Investigation for Proposed Wharf Development** A geotechnical investigation was conducted to evaluate subsurface conditions for the proposed wharf at the south end of Terminal 4. Seven river and three land borings were completed indicating that adjacent to the site the river is underlain by soft river mud while the site consists of loose medium dense sand that grades to sandy clayey silts then into a material observed similar to the river borings. Underlying the river mud, a gray fine to medium sand was encountered, which frequently grades to gravel below elevations -81 to -96. Based on the investigation, it was recommended that a circular cell with one connecting arc bulkhead with support be constructed at the site. **1972 Subsurface Investigation for Proposed Sanitary Sewer** A geotechnical investigation was conducted to evaluate subsurface conditions for the proposed sanitary sewer at Terminal 4. A total of 12 soil borings were completed with depths ranging from 9 and 21 feet bgs. Laboratory testing (moisture content, unit weight, and sieve analysis) was conducted on the soil samples. The subsurface explorations indicated that the site is underlain by fine to medium sand with pockets of silt and sandy silt. **1973 Soil Borings for Proposed Grain Elevator** A geotechnical investigation was conducted to evaluate subsurface conditions for the proposed grain elevator at Terminal 4. Four soil borings were completed to a depth of 90 feet bgs. The subsurface explorations indicated that the site is underlain by fine to medium sand.	

	1973 Foundation Investigation Union Pacific Railroad Tanker Berth A geotechnical investigation was conducted to evaluate subsurface conditions for the proposed tanker berth at Berth 412. Two jet probes with an approximate depth of 35 feet bgs were completed and one rotary boring was attempted at the site. The subsurface explorations indicated that the site is underlain by fine to medium sand with silt and pieces of wood. Based on the two jet probes and previous investigations, it was recommended that open-end steel pipe and/or pre-stressed concrete piling, driven to suitable penetration in the underlying sand formation, be utilized for support of the breasting dolphins. **1975 Modernization Program Terminal 4 Phase II Foundation Report** A geotechnical investigation was conducted to evaluate subsurface conditions for a ship loading dock and barge unloading area. Two borings were completed in the vicinity of the proposed operational area. Boring B-1 indicated that the site is underlain by 25 layer of very soft, organic silt, followed by 25 to 30 foot thick zone of alternate layers of sandy silt and silty sand. Boring B-2 confirmed that the subsurface model for the proposed ship loading dock was as described in the prior Phase I report. **1975 Modernization Program Terminal 4** In February and March 1975, additional borings were drilled at the barge unloading tower to confirm a previous model of the subsurface conditions. The borings indicated that the previous model was correct. **1979 Foundation Investigation for New Administration Building, Terminal 4** A geotechnical investigation was conducted to evaluate subsurface conditions for a new administration building. One boring was completed to a depth of 65.5 feet. The soils encountered were a fill of medium sand, soft to medium silt, stiff brown silt and medium sand with gravel. Because of the presence of the soft soils at the site, isolated spread and continuous footings were recommended. In addition, the placement of structural and surcharge fill was recommended to consolidate the soft soils before construction of the building. **1981 Marine Terminals Rehabilitation, Preliminary Engineering Geotechnical Considerations** A geotechnical evaluation was conducted to evaluate the subsurface conditions for the proposed extension of the steel wharf northward toward Slip 3. The	

	investigation included review of past subsurface investigations as well as installation of 29 shallow jet probes to determine the thicknesses of recently deposited soft basin silt. The soft basin silt was determined to range from 2.5 to 16 feet thick. Based on the investigation, it was recommended that the soft basin silts be removed from the project area and the cells to the wharf be filled with clean granular material. The fill area extended from the Terminal 4 Auto Storage Area to the south and into the area directly south of Slip 3. **1983 Foundation Investigation, Berth 408 RO/RO Area** A geotechnical investigation was conducted to evaluate subsurface conditions for the proposed RO/RO area at Berth 408. Two borings were completed to approximately 25 feet bgs. Observation wells were also installed in both borings to measure the depth to groundwater. Both borings indicated that the site is underlain by fine to medium grained sand with trace silt. Based on the investigation, it was recommended that the RO/RO area be constructed of cast-in-place concrete retaining walls with a concrete slab-on-grade. **1983 Final Report, Supplemental Foundation Investigation, RO/RO Area** Following modifications to the proposed design, a geotechnical investigation was conducted to evaluate subsurface conditions at the new location of the outboard retaining wall. Two borings were completed to approximately 50 feet bgs. The investigation results indicate the outboard retaining wall foundation is underlain by soft to medium stiff silt. It was reported that the silt was not a suitable bearing stratum for the retaining wall foundation loads. The design modifications were recommended over excavating the soil and placing a geotextile fabric. **1984 Foundation Investigation, Proposed Rail Car Unloading Building, Soda Ash Terminal** A geotechnical investigation was conducted to evaluate subsurface conditions for the proposed rail car unloading building. One boring was completed to approximately 127.5 feet bgs. The boring log indicates the site is underlain by a somewhat-variable soil profile; 14 feet of granular fill was found overlaying a thick layer of plastic silt. Below the silt, a thick layer of medium-dense sand that contains thin zones of silt extended to the bottom of the boring. It was recommended that foundations be extended through the fill and soft silt zone to reduce the risk of settlement.	

	1993 Geotechnical Investigation Planned Bulk Storage Area A geotechnical investigation was conducted to evaluate subsurface conditions for the proposed bulk storage area. The investigation included cone penetrometer tests (CPT), drilled borings, laboratory testing (moisture content, fines content, and consolidation testing), and engineering analyses. Three CPTs and two borings were advanced to depths of approximately 190 feet bgs. The CPTs and borings indicated that the site is underlain by sand fill above deep layered deposits of alluvial soils. Based on the investigation, it was determined the structure could be supported on shallow spread foundations with the bottom slab supported on grade (provided a relatively high magnitude of total and differential settlement could be tolerated). **2006 Preliminary Geotechnical Evaluation, Proposed Methanol Tank Farm for IRM at Terminal 4** A geotechnical investigation was conducted to evaluate subsurface conditions for a proposed methanol tank farm. One boring was completed to approximately 81.5 feet bgs. The boring log indicates the site is underlain by dredged sand fill, alluvial silt and sand. It was recommended that lightly loaded structures could be supported on conventional spread footings. **2006 Terminal 4 Geotechnical Report (Draft)** A geotechnical investigation was conducted to evaluate subsurface conditions for a proposed liquid natural gas area. Two soil borings were completed to approximate depths of 195 feet bgs, three shallow borings were completed to depths of 16.5 feet bgs and two Cone Penetrometer Test (CPT) soundings were completed. In addition, seismic exploration was conducted on February 7, 2006. The subsurface exploration indicated that there are several layers of sand and silt that overlie the Troutdale Formation, which was encountered at approximately 187 to 192 feet bgs. The seismic data indicated that the NEHRP classification D is appropriate for the site. **2006 Terminal 4 Geotechnical Report (Draft)** A geotechnical investigation was conducted to evaluate subsurface conditions for a proposed methanol tank farm for IRM. One soil boring was completed to a depth of 81.5 feet bgs. The subsurface exploration indicated that there is sand fill underlain by compressed alluvial silt underlain by alluvial sand. The seismic data indicated that the NEHRP classification F is appropriate for the site.	

	Slip 1 Area Investigations **Schnitzer Steel Products Soil Investigation (HAI, 1993)** In April 1993, approximately 20 to 30 engine carcasses were observed on the northern portion of Terminal 4 that lies adjacent to the Schnitzer Steel Products property. Bins on the Schnitzer property storing metal products for recycling exceeded capacity causing the engine carcasses to fall out of the bins onto the ground at Terminal 4. Oil staining on soil of Terminal 4 was observed in the area of the engine carcasses. HAI was contracted to perform an investigation to determine the cause of the oil staining. In April 1993, HAI collected four surface soil samples from visibly oil-stained soil. Chemical analysis indicated total petroleum hydrocarbons ranging from 35 to 36,000 ppm and PCBs at 1.6 ppm. Barium, cadmium, and lead were also detected at 1.8 ppm, 0.22 ppm, and 0.36 ppm, respectively. **Rogers Terminal Gearlocker Area (1997)** In 1997, following a Port environmental inspection of the Rogers Terminal & Shipping Gearlocker leasehold, oil stained soil was observed. Subsequent testing was completed on May 14, 1997 by Braun Intertec. Results indicated no further action was necessary. **Sediment Characterization Study of Local Port Sponsors' Berths (Hart Crowser, 1999)** The purpose of the investigation was to provide preliminary dredge prism characterization in support of the permitting process for the Columbia River Navigation Channel. Cores collected at Terminal 4 Berth 401 in September 1998 indicate that exceedances of various LCRMA SL and the ML for total DDT required further evaluation for disposal options. **Heavy Metal Air Monitoring Survey (Marine & Environmental Testing, Inc. [M&ET], 2001)** In 2001, M&ET conducted a survey to evaluate exposure to lead, cadmium, chromium, and barium while replacing railroad ties in contaminated soils. Samples were collected on employees and in work areas. Results revealed chromium below analytical limit of detection and no particulates above background in work areas. Exposures were below OSHA permissible exposure limits.	

	Assessment of Residual Fumigant Hazard at the Terminal 4 Grain Storage Tanks (PBS, 2004) In 2004 an assessment was conducted to determine the residual hazards associated with the use of aluminum phosphide (phostoxin, Fastphos, Quick Tox, etc.) fumigant in the grain storage tanks and associated plumbing systems. The catwalk areas and tank interiors were screened using a photoionization detector (PID) for airborne volatile organic compounds (VOCs). No elevated concentrations of VOCs were observed. **Summary of Contaminated Soil Removal Activities on the Former Cargill Leasehold (URS, 2004)** While removing soil from an area immediately west of the door to the hydraulic room on November 18, a section of dark grey soil exhibiting a diesel-like odor was exposed. Cargill's consultant, MACTEC, collected 13 soil samples around Building C-11, including three within the area of the visibly contaminated soil. The samples were analyzed for PAHs, PCBs, TPHs, and metals. PAHs were not detected above the Method Reporting Limit in two samples. Phenanthrene and pyrene were detected at concentrations slightly above the MRL in the one sample. PCBs were not detected above the MRL. The sample taken from the contaminated soil contained diesel range organics and residual range organics. The visually impacted soil was not completely removed due to access limitations. The site was investigated during the RI and TPH was not detected above the MRLs in soil. **Remedial Investigation Report Terminal 4 Slip 1 (ACA, 2007)** The purpose of the RI was to determine the nature and extent of potentially hazardous substances in Terminal 4 Slip 1 media and to evaluate constituent migration pathways at that area. The RI report summarizes previous site investigation including, but not limited to, the following reports: • Environmental Assessment and Underground Storage Tank Removal at Rogers Terminal (HAI, 1989) • Status Report: Polychlorinated Biphenyl Release of April 25, 1989 (HAI, 1989b) • Addendum to the Final Report: Polychlorinated Biphenyl Release of April 25, 1989, Additional Cleanup and Concrete Encapsulation (1990b) • Environmental Assessment of Marine Terminal 4 (Hart Crowser, 1991) • Environmental Review and Soil Sampling-PM Ag Products, Inc. (GeoEngineers, 1996) • Port of Portland Tank Management Manual (Century West 1995)	

	• Terminal 4 Track 401 Soil Sampling Project (URS, 2001) • Preliminary Assessment of Terminal 4 (Port, 2000) • Terminal 4 Early Action (BBL, 2004) • Groundwater seep sampling (HAI, 2003) • Environmental Site Assessment of CLD Pacific Grain/Cargill Leasehold (ATC, 2003) The RI was previously submitted to the EPA. **Source Control Alternatives Evaluation Terminal 4 Slip 1 Upland Area Operable Unit 2 (ACA/Newfields, February 2007)** Composite sampling of surface soil was conducted in the potentially erodible riverbank areas of OU2. All five of the composite samples along Wheeler Bay had at least one chemical above screening levels. The analytical results from the sampling can be found in Appendix A of the report. This report has been previously submitted to EPA. To prevent erosion and subsequent deposition of the bank and upland soils into the aquatic environment, the Port completed a source control measure under EPA oversight during the Removal Action Phase I work. **Final Storm Water Data Summary Report Terminal 4 Slip 1 and Slip 3 (New Fields/ACA, 2009)** A storm water characterization program was conducted at Terminal 4 starting in December 2006 through winter 2008 to evaluate discharges that originate from the Terminal 4 property. Exceedances of the JSCS screening levels were noted in both storm water and storm water solids data. The data was reviewed to assess whether potential surface soil sources identified in the RIs of Slips 1 and 3 correlated with the storm water and storm water solids results. Correlations were observed between PCBs in stormwater sediments and catch basin solids. The following reports are attached to this report: • Storm Water Evaluation Work Plan (ACA, 2007) • Rationale for Basin Selection for Storm Water Sampling and Additional Information Requested by Oregon Department of Environmental Quality (DEQ) (ACA, 2007) **Utility Rack Infrastructure Improvement (ACA, 2009)** Soil samples were collected to assess for the presence of PAHs within the proposed utility rack area, a proposed remedial action area identified in the Draft Feasibility Study. Surface soil samples were collected in May 2009 and results indicated no PAHs were detected above Method Reporting Limits	

	(MRLs). **Stockpile Sampling Results (Ash Creek, 2011).** Soil samples were collected from stockpiles at Terminal 4 Slip 1 and analyzed for the presence of PAHs to develop a beneficial use plan for the soil. **Slip 3 Area Investigations** **UPRR Terminal 4, Pier 5 Oil Recovery (UPRR, 1971)** UPRR installed five test borings, converted two borings into wells, and began recovery of oil at Slip 3 in response to oil seepage observed between November 16 and December 15, 1970. Between March and August 1971, recovery from the two wells ranged from 0.5 to 68 gallons per day. UPRR indicated the future use of a jet-pump system to recover oil from the wells. However, further information was not identified to confirm the system. **Investigation of the Distribution, Amount and Toxicity of Pencil Pitch at Terminal 4 Slip 3 (Waterways Resources Specialist, 1988)** The purpose of this investigation was to delineate the areal extent of pencil pitch in Slip 3. Twenty-eight surface sediment samples were collected and analyzed for PAHs, trace metals, pesticides, and PCBs. Analytical results indicated pencil pitch concentrations to be elevated at or downwind of Berth 411, PAHs were detected in samples collected with no pattern associated with the distribution of pencil pitch, only trace pesticides were observed, and elevated trace metals were identified. **Ambient Airborne Concentrations Monitoring of Pencil Pitch Dust (HAZCON, 1994)** The purpose of the air monitoring was to determine ambient concentrations of pencil pitch dust which may be present at the Port's personnel work stations at Terminal 4. Five locations were selected and monitored on January 19 and February 9 and 10, 1994. Detectable concentrations of coal tar pitch at three locations on January 19, 1994 exceeded the OSHA permissible exposure limit (PEL). It was recommended that additional monitoring be considered, particularly personnel exposure monitoring. **Neighborhood Pencil Pitch Dust Monitoring - (HAZCON, 1994)** The purpose of the air	

	monitoring was to assess the impact on the St. Johns neighborhood from possible spillage of pencil pitch from trucks carrying loads from Terminal 4 to the Koppers, Industries, Inc. terminal on the west side of the Willamette River. Six locations were selected in residential areas along truck routes and five locations near Berth 411 at Terminal 4 were monitored on April 14 and 15, 1994. No samples exceeded the OSHA PEL; however, no PEL exists for residential exposure. Results indicated minimal traces of pencil pitch were found in the neighborhood and that it posed no hazard to residents along the route. **Water Quality Monitoring During Dredging and Disposal of Sediments from Terminal 4 Slip 3 in Portland Harbor (Hartman and Associates, 1995)** Contamination in Slip 3 was investigated and approximately 35,000 cubic yards of material was subsequently removed from the slip by clamshell bucket. The material was barged to the Ross Island Lagoon for disposal. The analytical results of the confirmatory sediment testing program indicated that the concentrations of pencil pitch, trace metals and PAHs were reduced to the levels set by EPA. **Limited Phase-II Soil Sampling Report PM Ag Products, Inc. (DAI, 1996)** DAI collected soil samples from locations near Tank #16, where it had been previously reported that a release of nitrate fertilizer occurred 12 years ago. In addition, DAI supervised a tank tightness test in a 15,000 gallon diesel UST. The results of the soil samples identified the presence of nitrate. The tank passed the integrity test. **Field Sampling Report of the June 18, 1997 Pencil Pitch Spill (Hartman and Associates, 1998)** In June 1998, sampling was conducted on surface sediments to delineate the extent of pencil pitch contamination resulting from the June 18, 1997 pencil pitch spill at Slip 3 Berth 411. The analytical results of sediment testing indicated exceedances of the 0.5% dry weight regulatory limit in six samples. **Remedial Investigation Report, Terminal 4, Slip 3 Sediments, (Hart Crowser, 2000)** Beginning in 1998 Hart Crowser conducted a sediment RI to delineate the extent of contamination in Slip 3 sediments and to evaluate the potential risks to human health and environment posed by the presence of chemicals of concern in sediments at the site. References and results are contained in RI that was previously submitted to the EPA.	

	The RI report summarizes previous sediment investigations including: • Sediment Quality Report, Sediment Test Results from Terminal 4, Slip 3, Berths 410, 411, and 412 (Port of Portland, 1994) • Sediment Characterization Study, River Terminal 4, Slip 3 (Hart Crowser, August 29, 1997a) • Pencil Pitch Removal Oversight and Sediment Characterization Report (Hart Crowser, 1997b) • Portland Harbor Sediment Investigation (Roy F. Weston, 1998) • Remedial Investigation Report, Terminal 4 (Century West, 1994) • Remedial Investigation Report, Terminal 4, Slip 3 Upland (Hart Crowser, 1999) • Water Quality Monitoring During Dredging and Disposal of Sediments from Terminal 4 Slip 3 in Portland Harbor (Hartman Associates, 1995). **Remedial Investigation Report, Terminal 4, Slip 3 Upland (Hart Crowser, 2000)** The RI report summarizes previous site investigation including the following reports: • Waste Oil UST Decommissioning (HAI, 1991) • Remedial Investigation, Slip 3 Oil Seep (Century West, 1993-1994) • Site Characterization, Former Waste Oil UST (Century West, 1995) • Groundwater Monitoring (Century West, 1993-1996) • Diesel and Gasoline UST Decommissioning (GeoEngineers, 1996) • Quaker State Site Investigation (Kennedy/Jenks, 1997) • Site Investigation, Port of Portland Marine Terminal 4 (PEG, 1997a) • Additional Investigation (PEG, 1997b) • Northern Pipeline Investigation, Excavation, and Removal (May-June 1998) • Hart Crowser Additional Investigation (June 1998) The RI report also summarizes the previous remediation activities: • Petroleum Hydrocarbon Seep Interim Action starting in 1999 • UST decommissioning activities associated with Quaker State/Gearlocker area in 1991 and 1996. The RI was designed to assess the nature, extent, and magnitude of petroleum hydrocarbons, and other potential chemicals of concern that may be present at the Site. Data from this RI,	

	coupled with data from previous investigations, was used for risk assessment and analysis and for the evaluation of remedial alternatives. The results of the RI defined the extent of subsurface LNAPL from the former UPRR pipeline release in the area. The RI report was previously submitted to the EPA. **Maintenance Dredging Material, Characterization Study (Hart Crowser, March 2002)** Sediment cores were collected using a vibracore with a 4-inch-diameter aluminum core barrel deployed from the sampling vessel, JOHN B. PRESTON, operated by David Evans & Associates. Subsurface sediment coring was completed at three locations within the proposed dredge prism at Berth 410. Based on sampling and analytical results, the Port proposed maintenance dredging to a depth of –40 ft. CRD with an advanced maintenance overdredge of one foot at Terminal 4, Berth 410. The dredge material was suitable for upland disposal at a non-hazardous waste landfill, and did not expose new surface material with higher concentrations than the dredged sediments, in accordance with LCRMA guidance. **Phase I Data Summary Report, Remedial Investigation Terminal 4 Slip 1 (Hart Crowser, 2004)** This report summarizes the results of Phase I of the Remedial Investigation (RI) conducted at the Port of Portland (Port) Terminal 4 Slip 1 Upland Area. The report was prepared on behalf of the Port to provide additional information regarding the potential for transport of contaminants from possible AOCs to the Willamette River via the groundwater pathway. 16 ground water monitoring wells were installed to determine the groundwater flow direction and assess groundwater quality discharging to the slips and the Willamette River from adjacent site-specific AOCs. **Former Quaker State Farm Soil Characterization (BBL/Ash Creek/Newfields, 2005).** This report presents the results of soil characterization at the former Quaker State tank farm at the Terminal 4 Slip 3 Upland Area. Samples were collected and analyzed until the extent of PAHs exceeding human health risk based standards was defined. Once defined, the soil exceeding human health risk based standards would be excavated for off-site disposal. Initial sampling results suggested that the extent of soil containing PAH concentrations exceeding human health risk based standards was greater than anticipated and an Addendum to the Work Plan was prepared (Port of Portland, 2004) proposing an expanded characterization program.	

	LNAPL Removal, Groundwater Monitoring, and Contingency Plan Terminal 4 Slip 3 Upland Facility, (ACA/Newfields/BBL, June 2005) This LNAPL Removal and Groundwater Monitoring/Contingency Plan describes the procedures for addressing residual light, non-aqueous phase liquid (LNAPL) hydrocarbons and groundwater monitoring at the Terminal 4 Slip 3 Upland Area. The LNAPL originated from a release from the former UPRR pipeline. The residual LNAPL removal is part of a required remedial action for the area defined in the Record of Decision. LNAPL monitoring and removal began in 2003 and will continue at a minimum as long as the annual total recovery exceeds 50 gallons. When the annual total recovery falls below 50 gallons, each well will be evaluated for trends in LNAPL thickness and recovery rate and seasonal variations in recovery rate. LNAPL monitoring/removal may continue in an individual well if this well shows an increasing trend in its LNAPL recovery rate. The LNAPL monitoring/removal program will be terminated at this well when the trend in recovery rate is downward or the recovery rate from the well is less than 5 gallons per year. This report along with the quarterly monitoring reports from 2005 to 2009 can be found in Tab 6. **Pencil Pitch-South Bank Characterization (ACA, 2008)** The letter summarizes previous site investigations including the following reports: • Pencil Pitch Investigation Report (ACA, 2006) • Phase II Pencil Pitch Investigation Report (ACA, 2007) PAHs are present in surface soil on the south slip bank area at concentrations that exceed human health RBCs and/or sediment PECs. A Source Control Measure Alternative Evaluation is in preparation to asses an appropriate source control measure (SCM) to mitigate the potential for the soil to erode into the river. In addition, a Contamination Media Management Plan (CMMP) is in preparation to identify and document the appropriate actions to limit human exposure to this soil. The previous two reports have been submitted to the EPA, the 2008 letter is contained in Tab 6. See also the response to Questions 64 and 65.	

72. Describe any remediations or response actions you or your agents or consultants have ever taken on each Property either voluntarily or as required by any state or federal agency. If not otherwise already provided under this Information Request, provide copies of all investigations, risk assessments or risk: evaluations, feasibility studies, alternatives analysis, implementation plans, decision documents, monitoring plans, maintenance plans, completion reports, or other document concerning remediation or response actions taken on each Property.	See response to Questions 13(g), 13(j), 64 and 70 for the remediation and response actions conducted at the site.	
73. Are you or your consultants planning to perform any investigations of the soil, water (ground or surface), geology, and hydrology or air quality on or about the Property? If so, identify: a. what the nature and scope: of these investigations will be; b. the contractors or other persons that will undertake these investigations; c. the purpose of the investigations; d. the dates when such investigations will take place and be completed; and e. where on the Property such investigations will take place.	Quarterly ground water monitoring and product removal will continue at Slip 3.	See other environmental records at Tab 7.

Section 8.0 - Corporate Information		
74. Provide the following information, when applicable, about you and/or your business(es) that are associated with each Property identified in response to Question 4:	See response to bullets (a) through (e) below.	
a. state the current legal ownership structure (e.g.. corporation, sole proprietorship);	The Port of Portland was created by the Oregon legislature in 1891. Oregon Revised Statutes 777 and 778 contain the authority of the Port of Portland. It is a state Port District for an area encompassing all of Multnomah, Clackamas and Washington Counties. The Port is governed by a nine person commission appointed by the Governor of Oregon and confirmed by the State Senate.	See ORS 777 and 778 information in Tab 8 of the Port's 104(e) response for Willamette Cove, submitted to EPA and dated June 18, 2008.
b. state the names and current addresses of current and past owners of the business entity or, if a corporation, current and past officers and directors;	Port of Portland 121 NW Everett Portland, OR 97209	
c. discuss all changes in the business' legal ownership structure, including any corporate successorship, since the inception of the business entity. For example, a business that starts as a sole proprietorship, but then incorporates after a few years, or a business that is subsequently acquired by and merged into a successor. Please include the dates and he names of all parties involved;	Not applicable.	
d. the names and addresses of all current or past business entities or subsidiaries in which you or your business has or had an interest that have had any operational or ownership connection with the Properties identified in response to Question 4. Briefly describe the business activities of each such identified business entities or subsidiaries; and	Not applicable.	

e. if your- business formerly owned or operated a Property identified in response to Question 4, describe any arrangements made with successor owners or operators regarding liability for environmental contamination or property damage.	Not applicable.	
75. List all names under which your company or business has ever operated and has ever been incorporated. For each name, provide the following information:	Port of Portland Registered Trademark Name - Rivergate Industrial District	
a. whether the company or business continues to exist, indicating the date and means by which it ceased operations (e.g., dissolution, bankruptcy, sale) if it is no longer in business;	Yes, the Port of Portland is extant.	
b. names, addresses, and telephone numbers of all registered agents, officers and operations management personnel; and	Registered Agent: Krista Koehl General Counsel Port of Portland 121 NW Everett Street Portland, OR 97209 503-415-6062 President, Port Commission Jim Carter c/o Port of Portland 7200 NE Airport Way PO Box 3529 Portland OR 97208 503-415-6013 Vice President, Port Commission Paul A. Rosenbaum c/o Port of Portland 7200 NE Airport Way	

	PO Box 3529 Portland OR 97208 503-415-6013 Treasurer, Port Commission Peter Bragdon c/o Port of Portland 7200 NE Airport Way PO Box 3529 Portland OR 97208 503-415-6013 Secretary, Port Commission Diana Daggett c/o Port of Portland 7200 NE Airport Way PO Box 3529 Portland OR 97208 503-415-6013	
c. names, addresses, and telephone numbers of all subsidiaries, unincorporated divisions or operating units, affiliates, and parent corporations if any, of the Respondent.	Not applicable.	
76. Provide all copies of the Respondent's authority to do business in Oregon. Include all authorizations, withdrawals, suspensions and reinstatements.	Oregon Revised Statutes 777 and 778.	See ORS 777 and 778 information in Tab 8 of the Port's 104(e) response for Willamette Cove, submitted to EPA and dated June 18, 2008.

77. If Respondent is, or was at any time, a subsidiary of, otherwise owned or controlled by, or otherwise affiliated with another corporation or entity, then describe the full nature of each such corporate relationship, including but not limited to:	Not applicable.	
a. a general statement of the nature of relationship, indicating whether or not the affiliated entity had, or exercised, any degree of control over the daily operations or decision-making of the Respondent's business operations at the Site;	Not applicable.	
b. the dates such relationship existed;	Not applicable.	
c. the percentage of ownership of Respondent that is held by such other entity(ies);	Not applicable.	
d. for each such affiliated entity provide the names and complete addresses of its parent, subsidiary, and otherwise affiliated entities, as well as the names and addresses of each such affiliated entity's officers, directors, partners, trustees, beneficiaries, and/or shareholders owning more than five percent of that affiliated entity's stock;	Not applicable.	
e. provide any and all insurance policies for such affiliated entity(ies) which may possibly cover the liabilities of the Respondent at each Property; and	Not applicable.	
f. provide any and all corporate financial information of such affiliated entities, including but not limited to total revenue or total sales, net income, depreciation, total assets and total current assets, total liabilities and total current liabilities, net working capital (or net current assets), and net worth.	Not applicable.	

78. If Respondent is a partnership, please describe the partnership and provide a history of the partnership's existence. Provide a list of all current and past partners of any status (e.g., general, limited, etc.) and provide copies of all documents that created, govern, and otherwise rules the partnership, including any amendments or modifications to any of the originals of such documents, and at least five years of partnership meeting minutes.	Not applicable.	

Section 9.0 - Compliance With This Request		
79. Describe all sources reviewed or consulted in responding to this request, including, but not limited to:	Records reviewed for this request include the following Port departments: Business Development & Properties Marine Operations Environmental Affairs Legal Risk Engineering	
a. the name and current job title of all individuals consulted;	Nicole LaFranchise (Environmental Project Manager with Anchor QEA), Sara Moore (Environmental Project Manager with Formation Environmental, LLC), David Ashton (Assistant General Counsel, Environmental), Robert Balaski (former Director of Engineering Services; currently self-employed), Suzanne Barthelmess (Claims Manager), Greg Bieber (Safety Administrator; former Loss Control Manager), Thomas Bispham (Former Environmental Manager), David Breen (Environmental Project Manager), Richard Boyle (former Marine Operations Manager; former Terminal 4 Superintendent), Heidi Bullock (Environmental Manager), John Burt (Marine Security Officer), Carrie Butler (Mitigation Program Manager), Marvin Byington (Former Construction Manager), Scott Carter (Maintenance Superintendent), John Childs (Former Environmental Project Manager II), Herb Clough (Principal Environmental Engineer for Ash Creek Associates), Sheila David (Environmental Analyst), Kenneth Davison (Marine Security Officer), Sebastian Degens (Planning & Development Manager), David Dittmer (Engineering Project Manager), James Dorrance (Former Marine Properties Manager), Francois Elmaleh (Former Project Manager Marketing Development III), Matthew English (Marine Laborer General Foreman), Jenifer Fonseca-Littrell (Environmental Specialist), John Hachey (Former Operations Department Manager; former Manager of Terminal 4), Jessica Hamilton (Harbor Environmental Manager), Marla Harrison (Environmental Planning Manager), Walter Haynes (Engineering Project Manager), Marcel Hermans (Engineering Project Manager III), Michelle Hollis (Environmental Specialist), Robert Hrdlicka (former Terminal 4 Manager), Lee Huff (former Inspector III (Electrical), Michael Jeletic (Environmental Technician), David Kangas (former Electrician	

	Foreman), Krista Koehl (General Counsel), Peggy Krause (Former Real Estate Associate Property Manager), Jeff Krug (Terminal Manager), Lyle Larson (Property Maintenance Lead), Robert Lipscombe (former Marine Terminal Superintendent, former Marketing Development Manager), Kelly Madalinski (Environmental Manager), Fay Malloy (former Contracts Administrator III), Marvin Mathison (former Electrician), Nicholas Metrokas (Former Assistant Facility Maintenance Superintendent), Roland Montagne (former Environmental External Affairs Manager), Felix Morales (former Electrician Foreman), Robert Neibert (former Human Resources Director), Anzie Nelson (Associate Attorney), Michael Pickering (Senior Associate Hydrologist with Ash Creek Associates), Padriac Quinn (former Marine Environmental Manager), Denise Ragland (former Marine Superintendent), Phillip Ralston (Environmental Manager), Sabrina Rowlette (Environmental Technician), Jack Sabin (former Environmental Planner), Myron Salo (former Terminal 4 Manager), Jason Sheek (Marine Security Officer), Glenn Slack (former City CPD Inspector former Port Facility Maintenance Superintendent), Guinevere Smith (Discovery Program Manager), Camilla Sparks (Contract Administrator), Amanda Spencer (Principal Hydrogeologist with Ash Creek Associates), Mike Stevens (Senior Associate Environmental Engineer with Ash Creek Associates), Jim Stutters (former Labor Foreman), Guy Tanz (Principal Geologist with Hahn & Associates), Mike Thorp (Outside Legal Counsel), David Vale (Marine Security Officer), Kirsten White (Senior Project Environmental Engineer with Ash Creek Associates), Kenneth Weber (former Engineering Services Director), Ted Winter (Marine Terminals Facility Engineer), and Russell Ziemer (Plumber Foreman).	
b. the location where all sources reviewed are currently reside; and	Port of Portland offices and records storage.	
c. the date consulted.	January 2009 to present.	
80. If not already provided, identify and provide a last known address or phone number for all persons, including Respondent's current and former employees or agents, other than attorneys, who have knowledge or information about the generation, use, purchase, storage, disposal, placement, or other handling of hazardous materials at, or	See response to Question 79a.	

transportation of hazardous substances, waste, or materials to or from each Property identified in response to Question 4.		
81. If any of the documents solicited in this information request are no longer available, please indicate the reason why they are no longer available. If the records were destroyed, provide us with the following;	Records Review and Destruction Notices were reviewed to determine if any relevant records were destroyed pertaining to the Terminal 4 property. Consistent with public-recordkeeping requirements, the Records Review and Destruction Notices are maintained at the Port of Portland Administrative office. The Destruction Notices contain standard information including the former archive box number, originating department, and date of destruction. Limited information is provided on the contents of the files formerly contained within the boxes; records are described generally, using categories such as "miscellaneous correspondence," "chronological files," "memos," etc. While some provide a reference to a property to which the records may have pertained, it is so general that there is no way to determine with any certainty the nature or content of the documents that were destroyed.	
a. the document retention policy between 1937 and the present;	The Port is required by law to retain all "public records" for at least the period of time specified in a retention schedule approved by the State Archivist. The Port of Portland Records Retention and Disposition Schedule is the approved retention schedule for the Port of Portland. "Public records" include documents, books, papers, photographs, files, sound recordings, or machine-readable electronic records, regardless of physical form or characteristics, which are made, received, filed, or recorded by the Port in connection with the transaction of Port business. Employees must adhere to records retention and destruction procedures established by the Port's records manager in accordance with State statutes and the Port of Portland Records Retention and Disposition Schedule. The Port's retention and disposition schedules were suspended for records relevant to Portland Harbor when the Port received notice of Portland Harbor's listing on the National Priority List in December 2000.	See records management information at Tab 8 of the Port's 104(e) response for Terminal 1 North, submitted to EPA and dated July 18, 2008, specifically: • Ordinance 142 • Ordinance 149 • Ordinance 196 • 2001 Records Retention Schedule • 2001 Records Retention with

<table>
<tr><td></td><td></td><td>2003 Revision
• 2008 Records Retention Schedule</td></tr>
<tr><td>b. the approximate date of destruction;</td><td>At this time, no Port documents have been identified as destroyed. During the City CPD's ownership (1917-1971), however, a fire destroyed the CPD administrative offices in 1948. It is possible records relevant to the Terminal 4 property were destroyed at that time.</td><td></td></tr>
<tr><td>c. a description of the type of information that would have been contained in the documents;</td><td>Not applicable</td><td></td></tr>
<tr><td>d. the name, job title and most current address known by you of the person(s) who would have produced these documents; the person(s) who would have been responsible for the retention of these documents; the person(s) who would have been responsible for destroying the documents; and the person(s) who had and/or still have the originals or copies of these documents; and</td><td>Cydney Hill
Records Manager
Port of Portland
7200 NE Airport Way
Portland, OR 97218</td><td></td></tr>
<tr><td>e. the names and most current addresses of any person(s) who may possess documents relevant to this inquiry.</td><td>None known.</td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>82. Provide a description of all records available to you that relate to all of the questions in this request, but which have not been included in your responses.</td><td><u>Potentially Relevant But Redundant Documents:</u>

The following categories of documents exist relating to Terminal 4 that might be relevant but have not been included for the reasons stated.

<table><tr><th>Category of Document</th><th>Reasons Not Produced</th></tr><tr><td>Asbestos records</td><td>Not relevant to the constituents of interest detected in the Portland Harbor Superfund Site</td></tr></table></td><td></td></tr>
</table>

	Bids and proposals	Preliminary in nature; final documents and contracts included.		
	Business marketing materials prepared over time to assist in marketing Terminal 4 to potential tenants and users	Redundant of information provided in answers to CERCLA 104(e) questions.		
	Drafts of final documents	Drafts are redundant of the final documents included in the 104(e) response.		
	Duplicates of documents	Duplicates are redundant of the documents included in the 104(e) response.		
	Insurance records	Relevant and responsive records produced, other records are redundant or are not relevant to the matter.		
	Pesticide Application Forms or annual reports currently maintained by the Landscapers of Marine Facilities Maintenance at the shop (2008 to present)	Not relevant to the constituents of interest detected in the Portland Harbor Superfund Site.		
	Photographs of the site over its history	Relevant and responsive records produced. Representative photographs of the property have been provided.		
	Pleadings, motions and other papers in *Oregon Steel Mills v. Port of Portland* litigation, Case No. 201-00718 (Multnomah	Documents are public record and redundant to the documents produced.		

	County Circuit Court, 2001); *Port of Portland v. Union Pacific Railroad Company*, Case No. Case No. 98-886-PA (D. Or. 2001); *Arkema, Inc. et al v. Anderson Roofing Co. Inc. et al*., No. 3:09-CV-00453-PK (D. Or., filed Apr. 23, 2009); and *Port of Portland v. Oregon Center for Environmental Health*, 238 Or. App. 404 (2010).		
	The Port believes that it is reasonably likely that it will be in litigation with others over the responsibility for contamination in the Portland Harbor Superfund Site adjacent to Terminal 4. Work product in anticipation of litigation and written communications in order for the Port to obtain legal advice relating to the environmental liability issues associated with the Superfund Site, including attorney-client and work product communications, are not disclosed as part of this submission; however, no underlying facts referenced in such confidential communications that are responsive to these questions have been withheld on these confidentiality grounds. See also response to Question 70. This response is based on the documents the Port has been able to identify and review to date. If additional information responsive to this request becomes available or is encountered, it will be submitted under separate cover and responses will be supplemented, modified and corrected as warranted.		